IMMUNOREAGENTS
PRODUCT GUIDE 2018

Innovative reagents & services
for life sciences & diagnostics

expedeon

official distributor

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SZABO SCANDIC

About us

Expedeon is a world-leading expert in cutting-edge innovative reagents and services for life sciences and diagnostics, with application across workflows including protein electrophoresis, liquid biopsy, whole genome amplification, antibody and protein labeling, and immunoassay development.

Expedeon's product portfolio covers the entire immunoreagents, genomics and proteomics market, offering cutting-edge life science tools and reagents to support scientists from academia through to commercial manufacturing.

Our dedicated team of experts has the flexibility to develop and supply consistently high quality products both off-the-shelf and to customer specification.

Index

Lightning-Link®

SCAN-TO-ORDER

Lightning-Link® is the world's fastest, easiest to use and most efficient antibody conjugation method, offering antibody and protein labeling with only 30 seconds hands-on time and no separation steps.

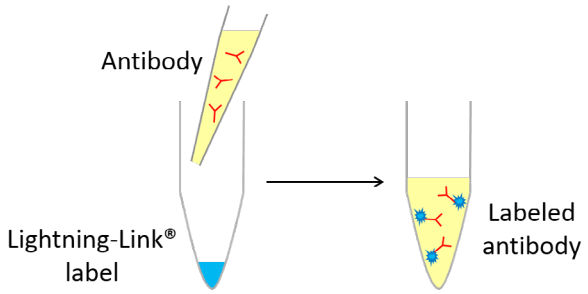
KEY BENEFITS

- **Directly label primary antibodies** – no need for secondaries!
- **Quick and easy-to-use** – no specialist knowledge required
- **No separation steps so 100% antibody recovery**
- **Consistent high quality, excellent batch-to-batch reproducibility**
- **Fully scalable for easy transfer from R&D to manufacturing**
- **Over 40 available labels using same chemistry**

HOW IT WORKS

The researcher simply pipettes the antibody or other biomolecule into a vial of lyophilized mixture containing the label of interest and incubates for either 3 hours (Lightning-Link® range) or only 15 min (Lightning-Link® Rapid range).

Despite its apparent simplicity, the Lightning-Link® process is sophisticated and generates conjugates with performance characteristics identical to, or better than, those prepared with laborious multistep conjugation procedures.



Lightning-Link® Process Diagram - No separation or washing step needed

Lightning-Link® enables you to label your antibody or protein quickly and easily. The Lightning-Link® range includes fluorescent proteins & dyes, biotin, streptavidin and various enzymes such as Alkaline Phosphatase, Glucose Oxidase and Horseradish Peroxidase.

DESCRIPTION	UNIT SIZE AND PRODUCT CODE			
	3 x 20ug	3 x 200ug	1 x 200ug	1 x 2mg
Lightning-Link® Rapid Biotin – Type A	370-0030	370-0010	370-0005	370-0015
Lightning-Link® Rapid Biotin – Type B	371-0030	371-0010	371-0005	371-0015
	3 x 10ug	3 x 100ug	1 x 100ug	1 x 1mg
Lightning-Link® Streptavidin	708-0030	708-0010	708-0005	708-0015
Lightning-Link® Alkaline Phosphatase (AP)	702-0030	702-0010	702-0005	702-0015
Lightning-Link® Glucose Oxidase	706-0030	706-0010	-	706-0015
	3 x 40ug	3 x 400ug	1 x 400ug	1 x 4mg
Lightning-Link® Horseradish Peroxidase (HRP)	701-0030	701-0000	701-0010	701-0002

FLUORESCENT DYES AND PROTEINS

LABEL	Lightning-Link product code	Maximal Absorbance (nm)	Excitation color	Suggested Excitation Laser Line (nm)	Maximal Emission (nm)	Extinction Coefficient ($cm^{-1}M^{-1}$)	Emission Color	Stokes Shift
AMCA	313-0030	352	N/A	355	452	19000		100
DyLight® 350	320-0030	354	N/A	355	432	15000		78
Atto 390	349-0030	388		405	468	24000		80
DyLight® 405	321-0030	402		405	428	30000		26
PerCP	718-0030**	484		488	678	380000		194
PerCP/Cy5.5	763-0030**	484		488	692	N/A		208
DyLight® 488	322-0030	496		488	524	70000		28
Alexa Fluor® 488	332-0030	496		488	524	73000		28
Fluorescein	310-0030 707-0030**	498		488	532	73000		34
R-Phycoerythrin	703-0030**	498, 544, 566†		488, 532, 561	580	2000000		82, 36, 14
PE/Texas Red®	767-0030**	498, 544, 566†		488, 532, 561	618	N/A		120, 74, 52
PE/Atto594	768-0030**	498, 544, 566†		488, 532, 561	632	N/A		134, 88, 66
PE/Cy5	760-0030**	498, 544, 566†		488, 532, 561	672	N/A		174, 128, 106
PE/Cy5.5	761-0030**	498, 544, 566†		488, 532, 561	700	N/A		202, 156, 134
PE/Cy7	762-0030**	498, 544, 566†		488, 532, 561	782	N/A		284, 238, 216
Atto488	350-0030	504		488	530	90000		26
B-Phycoerythrin	716-0005**	546		561	580	2410000		34
Cyanine Dye 3	340-0030	552		561	576	150000		24
Rhodamine	311-0030	555		561	588	94500		33
DyLight® 550	323-0030	556		561	584	150000		28
Atto 565	351-0030	570		561	598	120000		28
DyLight® 594	324-0030	594		561*	629	80000		35
Texas Red®	315-0030	596		561*	616	80000		20
DyLight® 633	325-0030	628		633, 635, 640	660	170000		32
Atto 633	353-0030	634		633, 635, 640	660	130000		26
FluoProbes647H	362-0030	650		633, 635, 640	684	250000		34
Cyanine Dye 5	342-0030	652		633, 635, 640	678	250000		26
Allophycocyanin	705-0005**	652		633, 635, 640	666	700000		14
APC/Cy5.5	764-0030**	652		633, 635, 640	700	N/A		48
APC/Cy7	765-0030**	652		633, 635, 640	790	N/A		138
DyLight® 650	326-0030	656		633, 635, 640	686	250000		30
Cyanine Dye 5.5	343-0030	680		640*	705	250000		25
DyLight® 680	327-0030	686		640*	716	140000		30
Atto700	354-0010	704		640*	724	270000		20
DyLight® 755	328-0030	756		750	794	220000		38
DyLight® 800	329-0030	776		750	798	270000		22

† (R-)PE has three maxima, and all can be used. The optimal will depend on the application.

* This Laser Line is at some distance from the Maximal Absorbance, so performance will be compromised if this dye is used with the suggested Laser Line.

** These kits require a 3 hour incubation time (instead of 15 minutes).

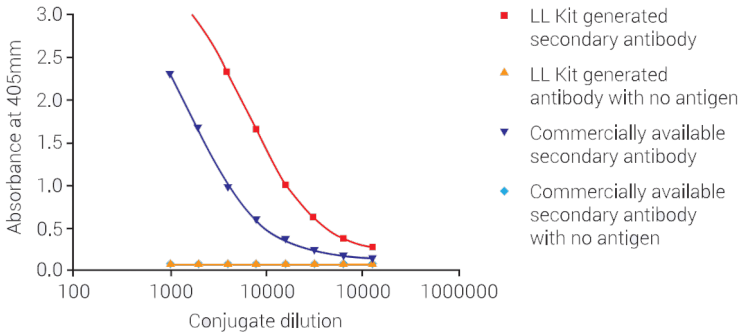
“Like many other small diagnostics companies we have used our own HRP activation and conjugation techniques for some years. However, on trying Expedeon's Lightning-Link® kit we found its simplicity and the high level of functionality of the conjugates produced to be significantly better. We have since tried another, similar kit but the resulting product was decidedly inferior, with lower signal and higher noise. We plan to continue using Lightning-Link® for our existing ELISAs and also for others to be added to our food testing range in the next few years.”

Chief Executive at Bio-Check (UK) Limited

COMPARISON DATA

ELISA DATA - DIRECT VS INDIRECT LABELING

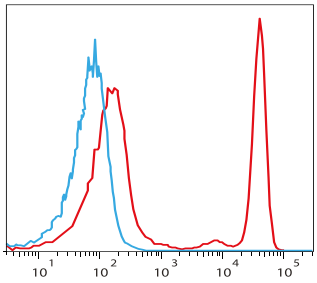
Alkaline Phosphatase anti-Human IgG (Fc) conjugates analyzed by ELISA

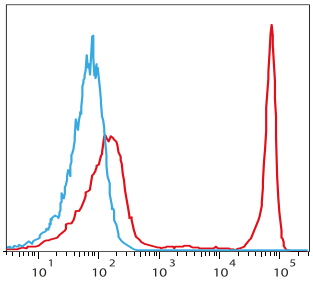


Anti-human IgG monoclonal antibody was purchased pre-conjugated to alkaline phosphatase from a commercial supplier. The same antibody was purchased in un-conjugated form and then conjugated to alkaline phosphatase using a Lightning-Link® kit (labeled as LL Kit). The Lightning-Link® conjugate demonstrates enhanced titre and sensitivity.

FLOW CYTOMETRY DATA - LIGHTNING-LINK® VS READY-CONJUGATED ANTIBODY

Lightning-Link® R-PE conjugation Ready-conjugated to R-PE





A mouse monoclonal antibody (RPA-T4 clone) specific for CD4 was purchased from a commercial source in both unconjugated and ready-conjugated formats. The unconjugated antibodies were linked to R-PE using a Lightning-Link® kit, and the conjugates were compared in flow cytometry staining of human peripheral blood lymphocytes. The blue curve shows unstained cells.

WESTERN BLOT DATA

Direct vs indirect labeling

	conjugated	unconjugated
primary antibody	Goat Anti-GFAP	Goat Anti-GFAP
target	GFAP	GFAP
sample lysate	mouse brain	mouse brain
primary antibody working concentration	0.185 µg/ml	0.5 µg/ml
secondary antibody used	no (direct conjugation)	yes
exposure time (min)	3	3
primary antibody source	Everest Biotech, Cat no: EB07478	
western blot analysis	 50kDa 37kDa	 50kDa 37kDa

Primary antibody directly conjugated to HRP using Lightning-Link® shows enhanced sensitivity in Western blotting compared to the traditional indirect technique.

Thunder-Link® PLUS

SCAN-TO-ORDER

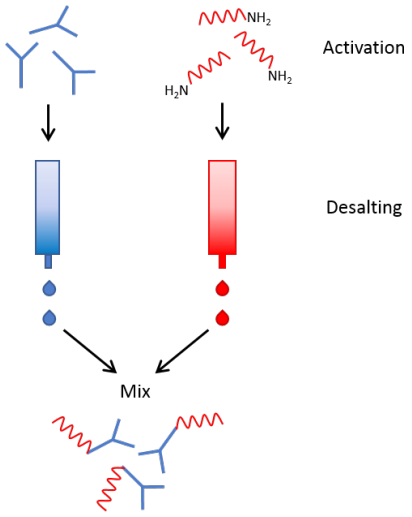
Thunder-Link® PLUS enables simple and rapid conjugation of antibodies to oligonucleotides, with high recovery of materials and a superior clean-up procedure. The kit is quick and simple to use, overcoming time consuming and lengthy protocols associated with standard conjugation methods.

KEY BENEFITS

- **Quick and easy to use** – Only 30 minutes antibody and oligo activation
- **Fast oligo conjugation** – only 1 hour!
- **High levels of antibody and oligo recovery** – Save precious reagents
- **Covalent bond** – Highly stable conjugates
- **Use your own oligo and antibody, at your desired ratio** – Flexible
- **Robust and flexible clean-up procedure** – No interference from unbound oligo
- **Freeze dried** – Ships at ambient temperature, long shelf-life
- **Stringently QC tested** – Consistent high quality, excellent batch-to-batch reproducibility
- **Unidirectional chemistry** – No risk of cross-linking
- **Suitable for single-stranded oligos of 10-120 bases, double-stranded oligos up to 80 base pairs** – Covers the majority of sequences
- **Linking chemistry works at both 5' and 3' end** – Provides ability to combine with other modifications
- **Positive control antibody and oligo included** – Enables confirmation of protocol success
- **Wide range of target proteins** – Also applicable to antibody fragments and small proteins

COMMON APPLICATIONS

- Immuno-PCR
- Proximity Extension Assay
- Proximity Ligation Assay
- Electrochemical Proximity Assays



Thunder-Link® PLUS Process Diagram

REFERENCES

Additional sex combs interacts with enhancer of zeste and trithorax and modulates levels of trimethylation on histone H3K4 and H3K27 during transcription of hsp70 - Epigenetics Chromatin. (2017)

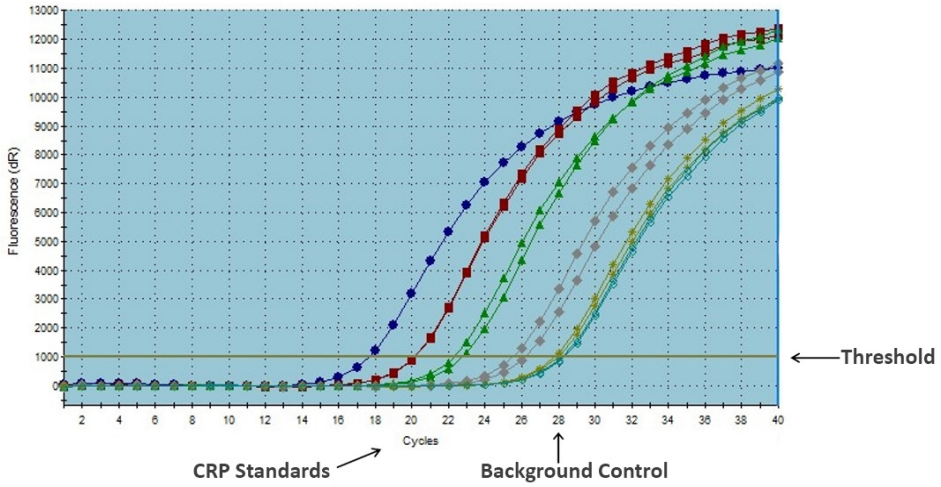
Label-free and high-throughput detection of biomolecular interactions using a flatbed scanner biosensor - ACS sens. (2017)

Nanoswitch-linked immunosorbent assay (NLISA) for fast, sensitive, and specific protein detection - PNAS (2017)

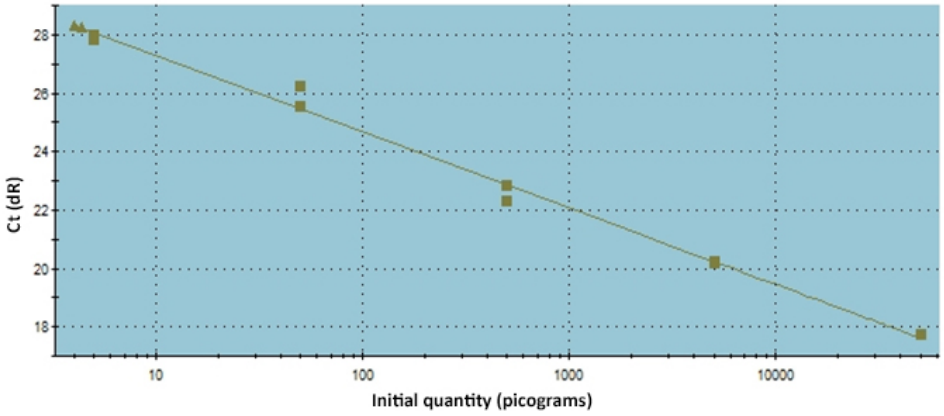
DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
Thunder-Link® PLUS	1 reaction control: 425-0000	3 reaction control: 425-0300

COMPARISON DATA

IMMUNO-QPCR DATA PREPARED WITH THUNDER-LINK®



1000-fold less capture antibody, 100 fold less detection antibody and 1000x more sensitive than equivalent ELISA



A mouse monoclonal antibody specific for human CRP (clone C7) was purchased in unconjugated format from HyTest. The unconjugated antibody was conjugated to an oligonucleotide using a Thunder-Link® kit, and was used as detection antibody in a sandwich Immuno-PCR assay using a polyclonal anti-CRP antibody as capture reagent.

The top graph plots the number of qPCR cycles undertaken vs. fluorescence intensity generated by SYBR green containing qPCR probes at particular antigen concentrations. The bottom graph then converts this data to antigen amount vs cycle number to enable calculation of a standard curve.

The results show that the assay utilizes 1000-fold less capture antibody, 100 fold less detection antibody and provides 1000-fold more sensitivity than the equivalent ELISA.

Colloidal gold

SCAN-TO-ORDER

Our colloidal gold is developed using specialized techniques that enable the production of extremely uniform spherical particles with a very narrow size distribution, minimizing variability within your assay.

Using our proprietary production protocols we can very quickly produce large quantities of gold nanoparticles, without compromising on quality. Get in touch for more information on bulk orders.

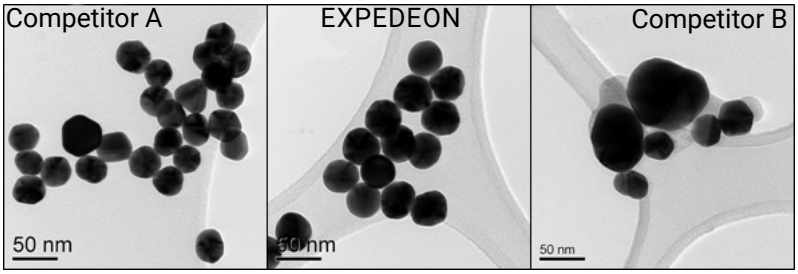
KEY BENEFITS

- Uniform spherical shape
- Narrow size distribution
- Ultra high quality
- Batch-to-batch consistency
- Available in bulk quantities
- High efficiency antibody binding for maximum sensitivity
- Available at high concentrations to simplify assay development
- Particles are buffer exchanged post manufacture to ensure consistent formulation

Our colloidal gold nanoparticles are suspended in citrate buffer and they are suitable for:

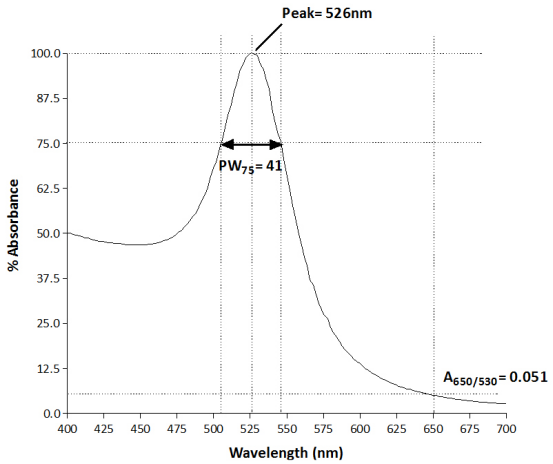
✓ Protein adsorption ✓ Oligonucleotide adsorption ✓ Surface modifications

Our production process allows particularly tight control of shape, completely preventing the formation of irregular structures seen in all other commercial products.



Transmission electron microscopy of commercially available gold particles. Note that the Expedeon particles (middle) have the most regular shape and consistent size.

QUALITY ASSESSMENT OF 40NM GOLD PARTICLES



ABSORBANCE SCAN

Peak position: 524-528nm

Peak width (PW_{75}): <43

$A_{650/530}$ ratio: <0.1

TEM ANALYSIS (~200 PARTICLES)

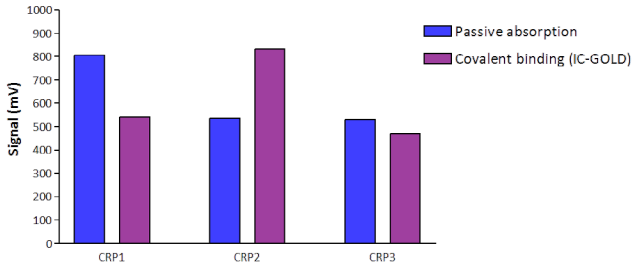
Particle diameter: 40nm ±4nm

Standard deviation: <4nm

%CV <10%

COMPLEMENTARY APPROACHES FOR MAKING CONJUGATES

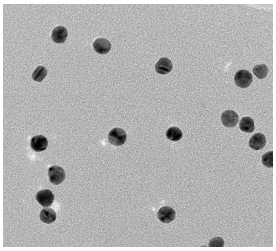
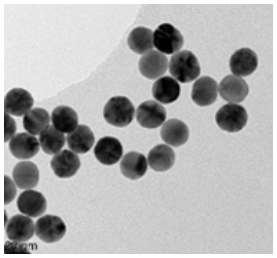
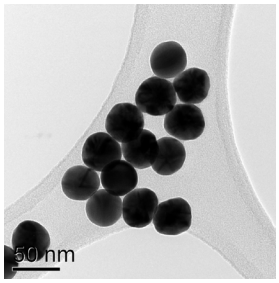
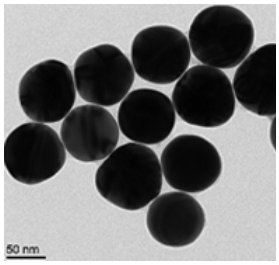
Antibodies may be attached to coated gold nanoparticles using simple covalent conjugation technologies or with traditional passive techniques.



Three CRP antibodies each conjugated using covalent and passive conjugation methods.

Each monoclonal antibody is unique and it is important to have a range of options for making nanoparticle conjugates to achieve the best possible performance in diagnostic assays.

Our colloidal gold is available in various sizes, concentrations and volumes for maximum flexibility.

	DESCRIPTION	UNIT SIZE	PRODUCT CODE
	10nm Gold Nanoparticles (1 OD)	20ml	3001-0020
	10nm Gold Nanoparticles (1 OD)	100ml	3001-0100
	10nm Gold Nanoparticles (10 OD)	20ml	3010-0020
	10nm Gold Nanoparticles (10 OD)	100ml	3010-0100
	20nm Gold Nanoparticles (1 OD)	10ml	3201-0010
	20nm Gold Nanoparticles (1 OD)	100ml	3201-0100
	20nm Gold Nanoparticles (10 OD)	10ml	3210-0010
	20nm Gold Nanoparticles (10 OD)	100ml	3210-0100
	20nm Gold Nanoparticles (15 OD)	10ml	3215-0010
	20nm Gold Nanoparticles (15 OD)	100ml	3215-0100
	40nm Gold Nanoparticles (1 OD)	10ml	201-0010
	40nm Gold Nanoparticles (1 OD)	100ml	201-0100
	40nm Gold Nanoparticles (10 OD)	10ml	210-0010
	40nm Gold Nanoparticles (10 OD)	100ml	210-0100
	40nm Gold Nanoparticles (15 OD)	10ml	212-0010
	40nm Gold Nanoparticles (15 OD)	100ml	212-0100
	40nm Gold Nanoparticles (20 OD)	10ml	220-0010
	40nm Gold Nanoparticles (20 OD)	100ml	220-0100
	80nm Gold Nanoparticles (1 OD)	10ml	3801-0010
	80nm Gold Nanoparticles (1 OD)	100ml	3801-0100
	80nm Gold Nanoparticles (10 OD)	10ml	3810-0010
	80nm Gold Nanoparticles (10 OD)	100ml	3810-0100
	80nm Gold Nanoparticles (15 OD)	10ml	3815-0010
	80nm Gold Nanoparticles (15 OD)	100ml	3815-0100

InnovaCoat® GOLD

SCAN-TO-ORDER

InnovaCoat® GOLD nanoparticle conjugation kits enable the easy conjugation of gold nanoparticles to antibodies or proteins for use in R&D applications and for the development and manufacture of diagnostic kits. The technology enables the covalent attachment of gold nanoparticles to antibodies, proteins or any other biomolecule with an available amine group, and can be beneficial when passive conjugation of a specific antibody is an issue, or for labeling small molecules.

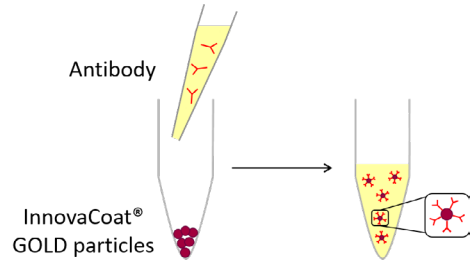
The kits are designed for optimization purposes, for example, for the screening of potential antibodies or small scale 'proof of principle' studies. Please contact us if you require any additional information or to discuss your bulk or custom conjugation requirements.

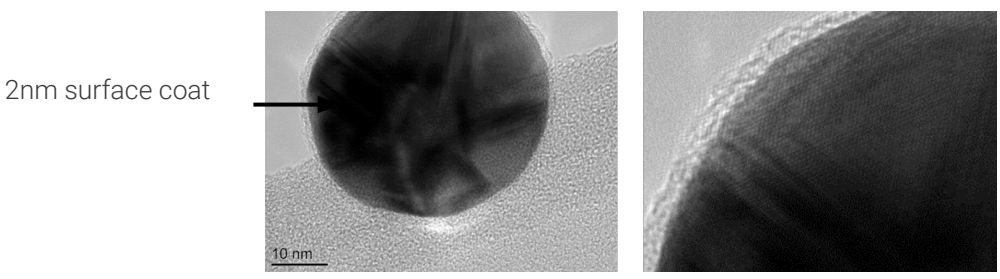
KEY BENEFITS

- Generate antibody-gold conjugates in 20 minutes
- Proprietary surface coat forms ultra-stable conjugates
- Fully scalable - easy transfer from R&D to manufacturing
- Consistent high quality, excellent batch-to-batch reproducibility
- Different nanoparticle sizes, concentrations and chemistries available

HOW IT WORKS

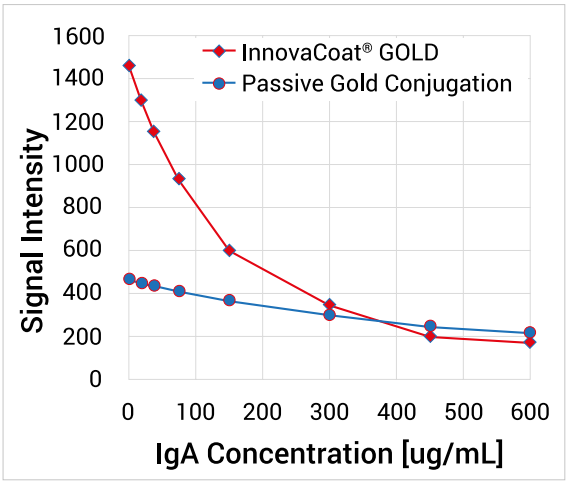
The gold nanoparticles within the kits have a proprietary surface coating which covalently binds the antibody or protein forming highly stable conjugates. This unique surface coating also completely shields the metallic core of the nanoparticle from the external environment, eliminating colloidal instability.

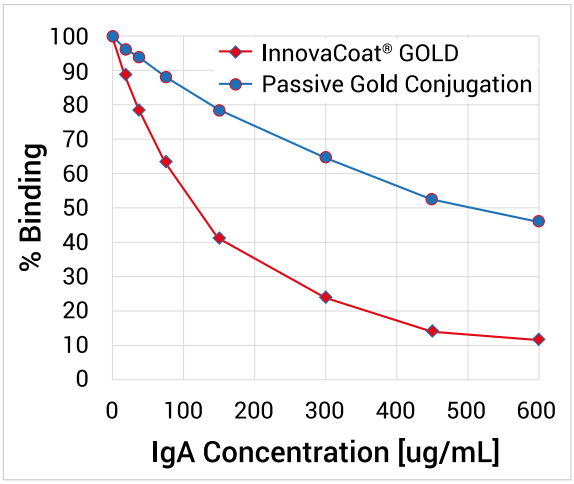




Resistance to 2.5M NaOH at 70°C for 90 minutes (competitor materials <1 second)

LATERAL FLOW DATA - INNOVACOAT® GOLD VS TRADITIONAL TECHNIQUES





Antibody conjugation using InnovaCoat® GOLD vs traditional passive conjugation techniques with uncoated gold nanoparticles, showing both enhanced signal intensity and improved specificity. 40nm gold particles were labeled with anti-IgA antibody, and used to measure IgA concentration in a lateral flow inhibition assay, with IgA bound to a lateral flow strip.

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
10nm InnovaCoat® GOLD	3 Reaction Mini Kit	228-0005
10nm InnovaCoat® GOLD	10 Reaction Mini Kit	228-0010
10nm InnovaCoat® GOLD	1 Reaction Midi Kit	228-0015
20nm InnovaCoat® GOLD	3 Reaction Mini Kit	229-0005
20nm InnovaCoat® GOLD	10 Reaction Mini Kit	229-0010
20nm InnovaCoat® GOLD	1 Reaction Midi Kit	229-0015
40nm InnovaCoat® GOLD	3 Reaction Mini Kit	230-0005
40nm InnovaCoat® GOLD	10 Reaction Mini Kit	230-0010
40nm InnovaCoat® GOLD	1 Reaction Midi Kit	230-0015
80nm InnovaCoat® GOLD	3 Reaction Mini Kit	231-0005
80nm InnovaCoat® GOLD	10 Reaction Mini Kit	231-0010
80nm InnovaCoat® GOLD	1 Reaction Midi Kit	231-0015

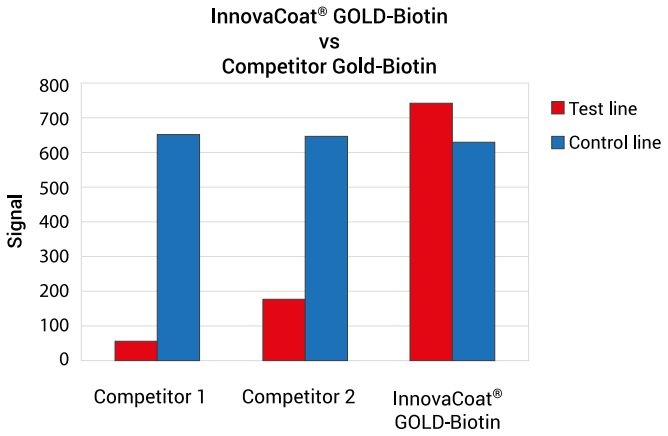
“Having made our own passively adsorbed antibody-coated gold colloid for some years then more recently moving to a high OD, no-spin method, we were a little reluctant to try out another method quite so soon. However the extreme simplicity and rapidity of the InnovaCoat® GOLD covalent conjugation, combined with the excellent functionality and consistency of the final product greatly helped us make the change. We now use less colloid per test in a demanding, room temperature stored, liquid formulation and are finding the development of new rapid tests to be significantly easier.”

Phil Goodwin, UK Biotechnology Professional

InnovaCoat® GOLD Conjugates

SCAN-TO-ORDER

Our gold nanoparticle conjugates are manufactured using our InnovaCoat® GOLD nanoparticles which have a proprietary surface coat that covalently binds the detection protein providing highly stable conjugates.



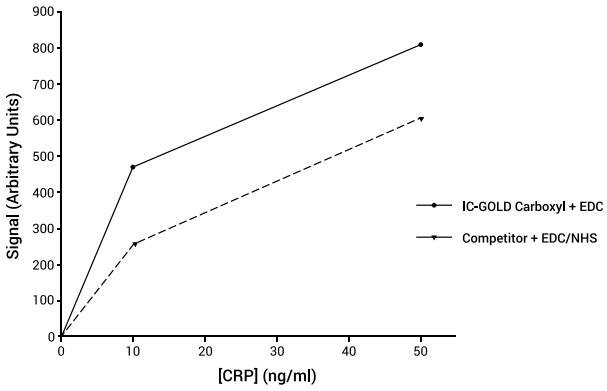
Comparison of test and control line signal intensities between biotin conjugated gold nanoparticles from Competitor 1 or 2 and covalently conjugated InnovaCoat® GOLD-Biotin on lateral flow test strips.

AVAILABLE GOLD NANOPARTICLE CONJUGATES:

CONJUGATE	UNIT SIZE	PRODUCT CODE 10nm	20nm	40nm	80nm	TARGET GROUP
InnovaCoat® GOLD Streptavidin (10OD)	0.2ml	252-0200	251-0200	250-0200	-	Biotin
	1ml	252-1000	251-1000	250-1000	-	
InnovaCoat® GOLD Biotin (10OD)	0.2ml	-	-	240-0200	-	Streptavidin
	1ml	-	-	240-1000	-	
InnovaCoat® GOLD Goat Anti-Mouse (10OD)	0.2ml	214-0200	215-0200	216-0200	217-0200	Mouse IgG
	1ml	214-1000	215-1000	216-1000	217-1000	
InnovaCoat® GOLD Goat Anti-Rabbit (10OD)	0.2ml	218-0200	219-0200	213-0200	221-0200	Rabbit IgG
	1ml	218-1000	219-1000	213-1000	221-1000	
InnovaCoat® GOLD Protein A nanoparticle conjugate	0.2ml	-	224-0200	222-0200	-	IgG
	1ml	-	224-1000	222-1000	-	
InnovaCoat® GOLD Protein G nanoparticle conjugate	0.2ml	-	225-0200	223-0200	-	IgG
	1ml	-	225-1000	223-1000	-	

INNOVACOAT® GOLD CARBOXYL

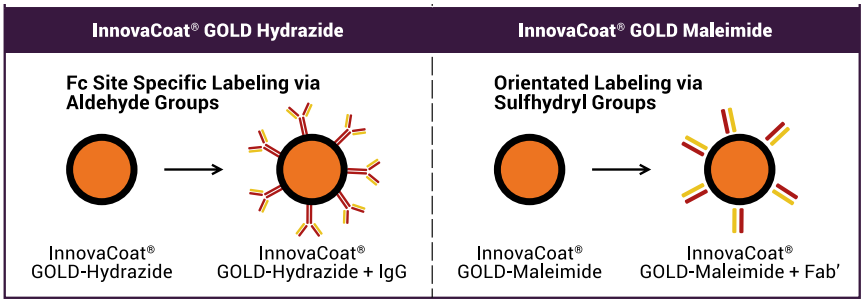
InnovaCoat® GOLD-Carboxyl nanoparticles are coated gold nanoparticles functionalized with carboxyl groups that allow the covalent conjugation of antibodies, using the water soluble carbodiimide crosslinker EDC. Unlike traditional EDC/NHS coupling used to activate carboxyl groups, InnovaCoat® GOLD Carboxyl nanoparticles are optimized for single step EDC covalent coupling without aggregation. This eliminates the usual EDC/NHS preactivation and washing steps. This process dramatically speeds up the labeling process so that conjugates are ready to use in less than 35 minutes. InnovaCoat® GOLD- Carboxyl nanoparticles have a narrow size distribution, a uniform spherical shape and high batch-to-batch consistency.



INNOVACOAT® GOLD MALEIMIDE & HYDRAZIDE

The InnovaCoat® surface is firmly anchored to the gold nanoparticle and is resistant to extreme conditions, it is therefore very easy to introduce derivatives of the main technology.

Catalogue products include InnovaCoat® GOLD-Maleimide, which is perfect for coupling small thiolated antibody fragments. Such fragments tend to denature on bare metal but are afforded protection on the more favorable InnovaCoat® surface. The Hydrazide gold derivative may be used for orientated coupling of periodate-treated antibodies.



AVAILABLE GOLD NANOPARTICLE CONJUGATES:

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE		
		VALIDATION KIT	1 REACTION MIDI KIT	3 REACTION MINI KIT
InnovaCoat® GOLD - Hydrazide Site Specific Labeling Kit	40nm	280-0300	280-0100	280-0000
InnovaCoat® GOLD – Maleimide Site Specific Labeling Kit	10nm	-	272-0015	272-0005
	20nm	-	271-0015	271-0005
	40nm	-	270-0015	270-0005

SCAN-TO-ORDER

Latex Conjugation Kits

Our Latex Bead Conjugation Kits are one-step kits for covalently conjugating antibodies, proteins and peptides (or any other biomolecule with an amine group) to specially treated latex beads without the need for extensive optimization.

Our latex conjugation reaction has been developed using our expertise in simple and quick one-step antibody conjugations such as our InnovaCoat® GOLD nanoparticle conjugation kits and our Lightning-Link® antibody labeling kits to produce a product unlike any latex bead conjugation kit available on the market.

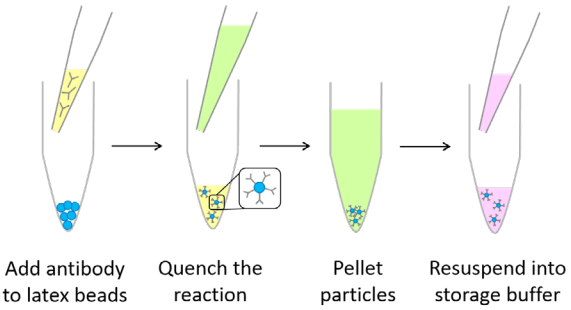
KEY BENEFITS

- **Quick and easy to use** – save time, no specialist knowledge required
- **Different colors available** – flexible, allows multiplexing
- **Stringently QC tested** – consistent high quality, excellent batch-to-batch reproducibility
- **Covalent bond** – highly stable conjugates
- **Freeze dried** – ships at ambient temperature, long shelf-life
- **Fully scalable** – easy transfer from R&D to manufacturing
- **No extensive pH optimization required** – save precious antibody / protein
- **Resistant to aggregation** - generation of high quality data

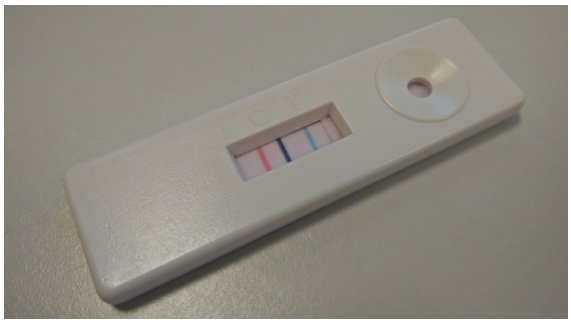
HOW IT WORKS

The researcher simply pipettes the antibody into the vial of lyophilized latex and incubates the reaction for 15 minutes. After quenching the reaction, the researcher pellets the latex and removes the buffer. Now the antibody is ready to be resuspended in the storage buffer. The entire procedure takes 3 minutes hands-on time and 35 minutes total time until the conjugates are ready to use.

High yields of functional conjugates can be made without the need for harsh resuspension methods like sonication and vortexing!

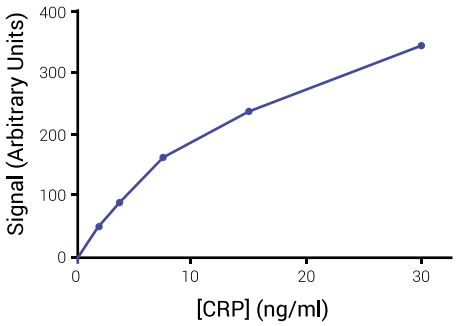


Latex Conjugation Kit Process Diagram

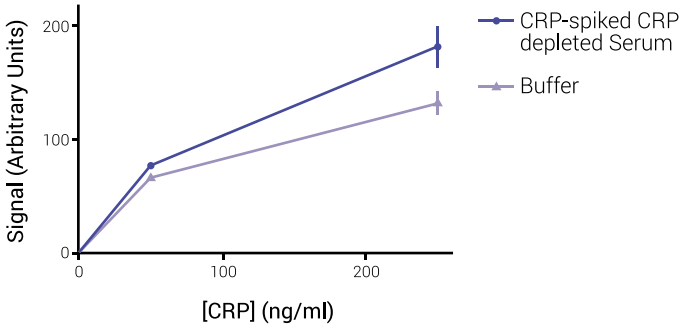


Multiplexed latex. Three colors of latex each conjugated to a different antibody or protein and forming a line either by a direct binding event (red and black latex) or a sandwich assay binding event (blue latex). The three colors of latex demonstrate no aggregation or background staining.

LATERAL FLOW DATA



Lateral Flow Assay of our specially-treated latex beads conjugated to a monoclonal anti-CRP antibody (mAb 1) titrated against CRP. 2 ng/ml CRP can easily be detected.



Lateral Flow Assay of our specially-treated latex beads conjugated to a monoclonal anti-CRP antibody (mAb 2) titrated against CRP in buffer or CRP spiked CRP-depleted serum (100% serum). The latex behaves similarly in serum and buffer, and no aggregation or non-specific binding is seen.

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
Latex conjugation kit – 400nm Blue	4 reaction mini kit	1000-0040
	10 reaction mini kit	1000-0100
	1 reaction midi kit	1000-0120
Latex conjugation kit – 400nm Black	4 reaction mini kit	1004-0040
	10 reaction mini kit	1004-0120
	1 reaction midi kit	1004-0100
Latex conjugation kit – 400nm Red	4 reaction mini kit	1002-0040
	10 reaction mini kit	1002-0100
	1 reaction midi kit	1002-0120

Europium Conjugation Kit

SCAN-TO-ORDER

The Europium Conjugation Kit significantly simplifies the conjugation of antibodies and proteins to 200nm europium (Eu) particles.

The europium beads have a specially treated surface coat which covalently binds antibodies and proteins, generating highly stable conjugates that are resistant to aggregation.

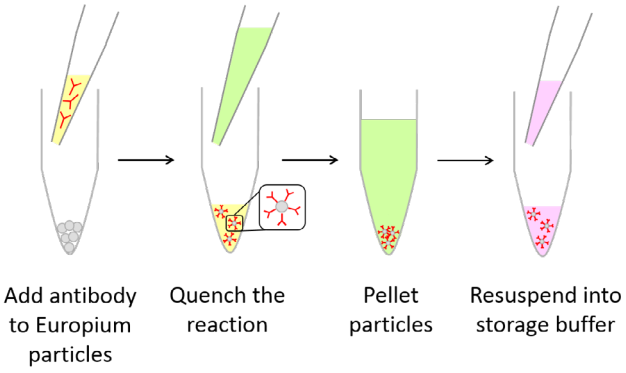
KEY BENEFITS

- Unique product - conjugates can be run on an immunochromatographic assay* as well as a microwell-based assay
- 15-fold higher sensitivity compared with other common particles
- Generation of stable conjugates
- Resistant to aggregation
- No harsh resuspension methods required
- Conjugates ready to use in 35 minutes
- Fully scalable for easy transfer from R&D to manufacturing

*Detection of europium conjugates in a lateral flow assay will require either a fluorescence strip reader or an UV transilluminator.

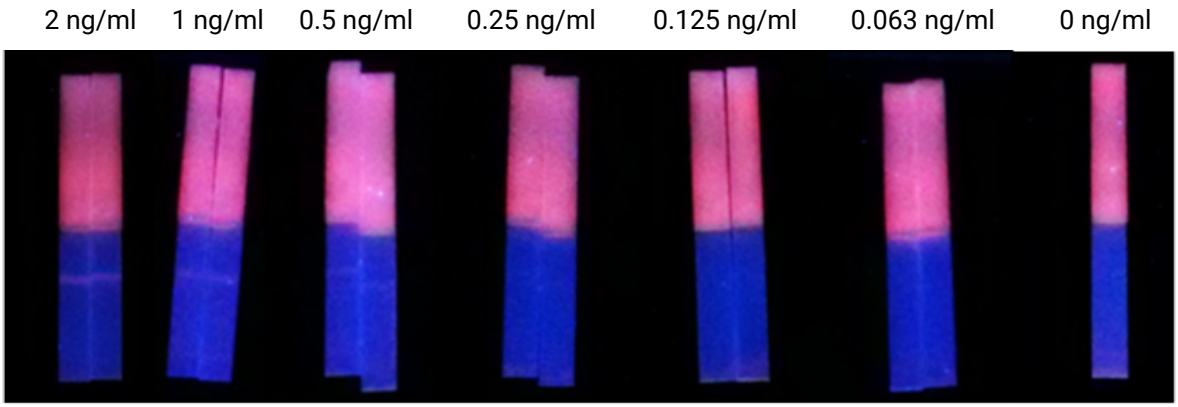
HOW IT WORKS

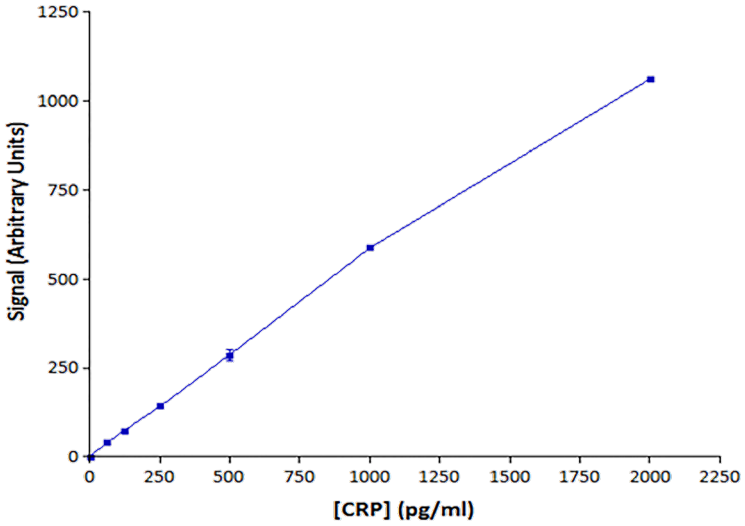
The europium particles are supplied freeze dried. The conjugation reaction is initiated simply by reconstituting the lyophilized mixture with your antibody. The antibody is then covalently bound (via lysine residues) to the proprietary surface on the europium nanoparticles.



Europium Conjugation Kit Process Diagram

EUROPIUM BEADS CONJUGATED TO A MONOCLONAL ANTI-CRP ANTIBODY





Typical results obtained from a UV transilluminator (top) and a fluorescence reader (bottom), showing europium conjugated to a monoclonal anti-CRP antibody.

The conjugate is easily able to detect as little as 63pg/ml CRP, in part due to the low background and lack of aggregation.

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
Europium Conjugation Kit	4 reaction mini kit	1200-0040
	10 reaction mini kit	1200-0100
	1 reaction midi kit	1200-0120

Magnetic Conjugation Kits

SCAN-TO-ORDER

The Magnetic Conjugation Kit allows one-step conjugation of antibodies, proteins and peptides (or any other biomolecule with an amine group) to specially treated magnetic particles without the need for extensive optimization of the conjugation reaction.

The 0.5µm specially treated iron oxide magnetic particles offer you the right balance between high surface area and fast separation. The binding capacity of our magnetic particles is higher than that of other magnetic particles on the market and twice that of leading competitors. This allows you to reach the desired sensitivity with fewer particles and therefore minimizes the risk of unspecific binding.

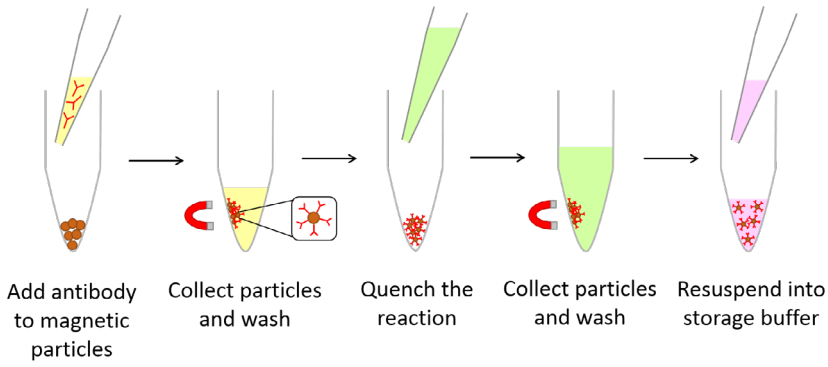
KEY BENEFITS

- **Quick and easy to use** – save time, no special knowledge required
- **High binding capacity** – achieve high sensitivity with less material
- **High coupling efficiency** – no antibody loss during conjugation
- **Covalent bond** – highly stable conjugates
- **Freeze dried** – ships at ambient temperature, long shelf-life
- **Fully scalable** – easy transfer from R&D to manufacturing
- **No extensive optimization required** – save precious antibody / protein
- **Can be used in a wide range of applications** – flexible

HOW IT WORKS

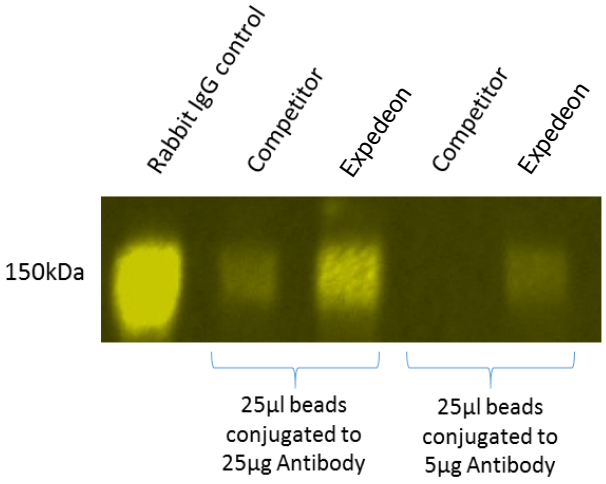
Simply pipette your antibody into the vial of magnetic particles and incubate with constant mixing for 30 minutes. After removing the supernatant and washing, quench the reaction for 30 minutes with constant mixing. Finally wash and store the magnetic particle conjugate in storage buffer. The entire procedure requires only 3 minutes hands-on time and your conjugate will be ready to use in a total time of 1 hour.

The conjugation procedure has been optimized to have minimal/no unbound antibody at the end of the conjugation reaction.



Magnetic Conjugation Kit Process Diagram

COMPARISON DATA



25µg and 5µg Goat anti-rabbit antibody were added to each of two mini vials of magnetic particles, and to 25µl of 1% magnetic beads from a leading competitor and processed as per the respective protols. The conjugates were used to immunoprecipitate rabbit IgG from rabbit serum. The eluted samples were run by SDS-PAGE and analyzed by Western blot against rabbit IgG. Expedeon's Magnetic Conjugation Kit has a higher binding capacity and coupling efficiency than the competitor products, and allows you to detect the antigen of interest with fewer reagents .

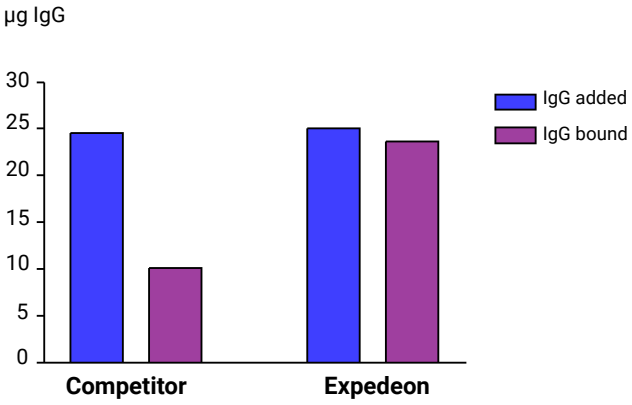


Figure 2. Magnetic Conjugation Kit binding capacity.

Goat anti-rabbit antibody was conjugated to 25 µl of 1% magnetic particles from Expedeon's conjugation kit (1h procedure), and to magnetic particles from a leading competitor (4h procedure) as per the respective protocols. The quantity of IgG added to the magnetic particles, and the amount of unbound IgG at the end of the conjugation, were quantified by Bradford protein assay. Expedeon's Magnetic Conjugation kit demonstrates a considerably higher binding capacity.

SPECIFICATIONS

Core: Iron oxide
Mean diameter: 0.5µm
Binding capacity: ≥70µg of Goat anti-rabbit antibody/mg of beads

PRODUCTS AVAILABLE

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
Magnetic conjugation kit	3 reaction mini kit	1300-0005
	10 reaction mini kit	1300-0010
	1 reaction midi kit	1300-0015

Universal Lateral Flow Kit

SCAN-TO-ORDER

The Universal Lateral Flow Assay (LFA) Kit is designed to enable the easy development of customized sandwich lateral flow assays. The great advantage of this kit is its adaptability to any pair of capture and detection antibodies, which allows the detection of any type of analyte* without the need spray down capture antibodies on the test strip, a labor-intensive process that consumes large amounts of expensive antibody reagent.

KEY BENEFITS

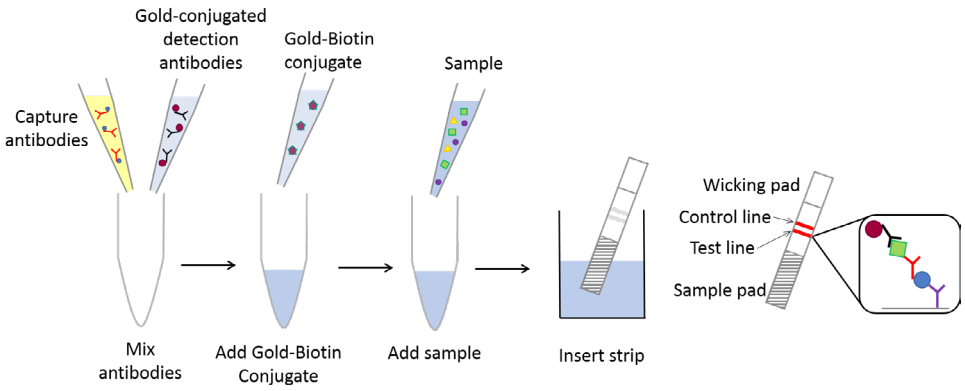
- **Fully customizable** – adaptable to any pair of capture and detection antibodies **and** can detect any type of analyte*
- **Quick & easy to use** – both conjugations can be set up in only 30 seconds
- **No false negative results** – assay is compatible with biological samples
- **No specialized or costly equipment**
- **Can be qualitatively and quantitatively analyzed using the supplied scoring card or a LFA reader respectively**

** The antigen must contain at least two antigenic sites for the binding of the capture and detection antibodies*

HOW IT WORKS

The kit combines our easy to use Lightning-Link® antibody labeling and InnovaCoat® GOLD nanoparticle conjugation technologies with an immunochromatographic test performed on Universal LFA strips. The capture antibody is conjugated to Lightning-Link® Ulfa-Tag, while the detection antibody is conjugated to 40nm InnovaCoat® GOLD, both of which require only 30 seconds to set up.

The capture and detection antibodies are diluted and incubated with the analyte and 40nm InnovaCoat® GOLD-Biotin and then run on Universal LFA strips. Universal LFA strips consist of a nitrocellulose membrane containing a 'Test line' (T-line) of immobilized anti-Ulfa-Tag antibody, that binds the Ulfa-Tag-conjugated capture antibody which further binds the analyte in complex with the InnovaCoat GOLD®-detection antibody. A red T-line appears when the analyte is present and the line intensity varies depending on the analyte concentration (see Figure 1). Universal LFA strips also contain a 'Control-line' (C-line) striped with streptavidin, which confirms that the test is valid, and an absorbent pad to promote and control the flow of sample through the membrane.



COMPARISON DATA

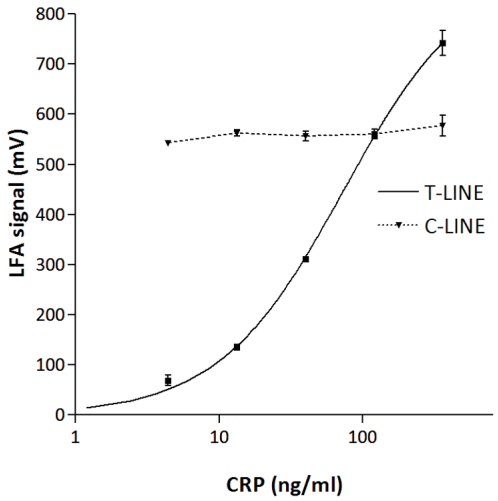


Figure 1. Example of sandwich lateral flow assay for the detection of CRP in serum using the Universal Lateral Flow Assay Kit: Lighting-Link® Ulfa-Tag and 40nm IC-GOLD are used to conjugate the capture and detection antibody respectively. Results were analyzed using Qiagen ESEQuant reader.

KIT COMPONENTS

3x 100ug Lightning-Link® Ulfa-Tag conjugation kit

- Target amine groups
- Conjugate up to 3 different capture antibodies
- Not suitable for nucleic acid or small molecule conjugation
- Ulfa-Tag is used in many molecular biology applications

3x MINI reaction 40nm InnovaCoat® GOLD

- Conjugate up to 3 different detection antibodies
- Conjugate is ready to use in just 20 minutes
- Forms highly stable conjugates
- Proprietary surface coating prevents metal-protein interactions
- 40nm InnovaCoat GOLD®-Biotin

100 Universal-LFA strips

Buffer

2 x 96-well low binding well plates

Scoring card

PRODUCT AVAILABLE

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
Universal Lateral Flow Assay Kit	100 Strips	4300-0100

FlexLISA® Kits

SCAN-TO-ORDER

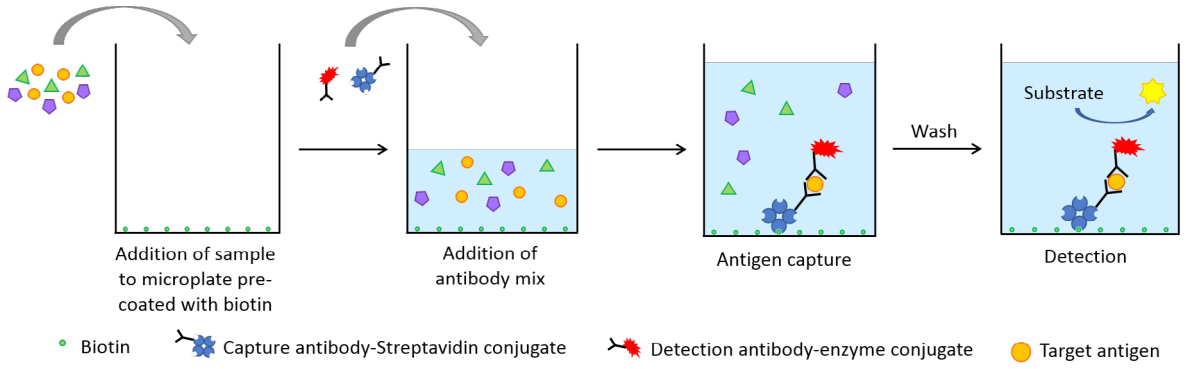
The FlexLISA® kits are designed for the development and optimization of sandwich ELISA assays to detect the presence of any antigen with a high affinity for any antibody pair in complex samples (serum, plasma, urine etc.).

KEY BENEFITS

- Easy antibody labeling – uses world leading Lightning-Link® technology
- Rapid
- Uses 40 times less capture antibody – save on cost of materials
- Use your antibodies of choice
- Conjugate up to 3 capture and 3 detection antibodies – ideal for screening
- Flexibility to run multiple conjugates on a plate simultaneously
- Choice of HRP or AP for enzymatic detection

HOW IT WORKS

A rapid one-step protocol is used in this kit, employing pre-blocked microtitre well strips coated with biotin. The FlexLISA® assay is run by adding the sample and the antibody mix to the wells, incubating for 1 hour, washing and reading the assay plate. FlexLISA® is ideal for quick and reliable ELISA assay development, antibody pair screening and ELISA assay optimization.

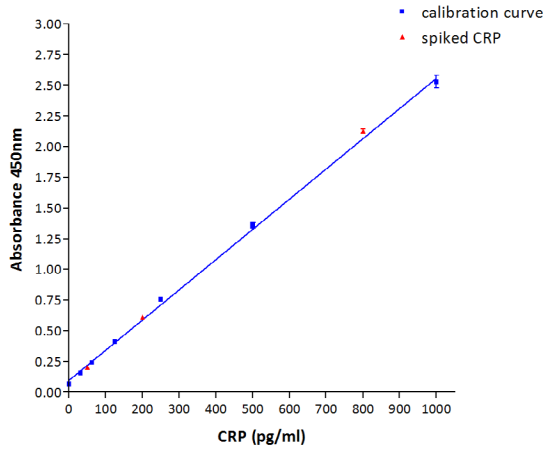


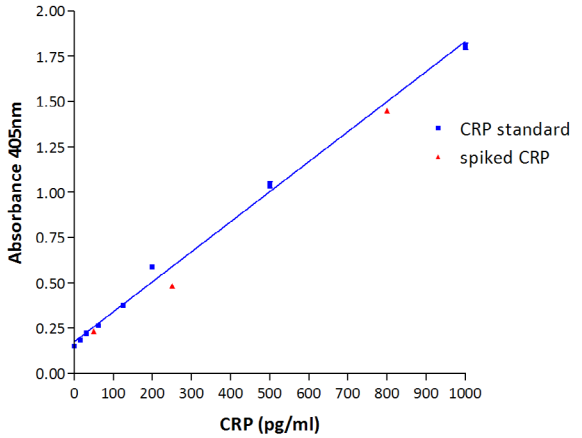
THE KIT CONTAINS:

- Lightning-Link® conjugation technology for the labeling of the capture and detection antibodies of choice:
  - Lightning-Link® Streptavidin (3x10ug*) – for labeling up to 3 different capture antibodies
  - Lightning-Link® HRP or alkaline phosphatase (3x10ug*) – for conjugation of up to 3 different detection antibodies
- A biotin pre-coated 96 well stripwell plate which can be provided either as clear or black, depending on the enzymatic substrate (12 x 8 -strip well) in a re-sealable foil pouch
- Not provided: antibodies, assay buffers, enzyme detection solutions

**Each 10ug vial is enough to run a 96 well plate: less than 0.1ug of capture or detection antibody/well is required and the 3 reactions provide the flexibility to run multiple conjugates/assays for optimization.*

COMPARISON DATA

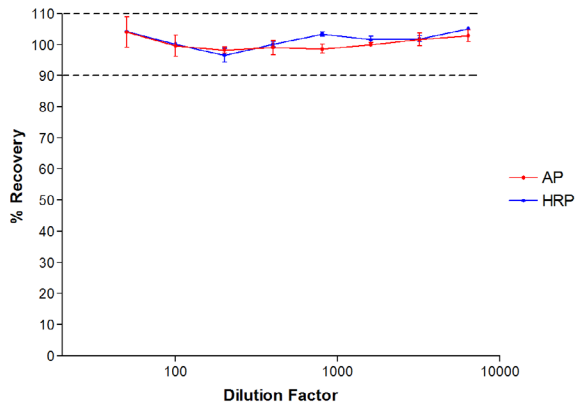




	800 pg/ml	200 pg/ml	50 pg/ml
Mean	2.126	0.609	0.199
StDev	0.064	0.011	0.005
%CV	3.00	1.88	2.59

	800 pg/ml	200 pg/ml	50 pg/ml
Mean	1.451	0.483	0.233
StDev	0.033	0.011	0.013
%CV	2.28	2.34	5.67

FlexLISA® data showing the measurement of the concentration of test samples against a standard curve. An anti-CRP antibody was conjugated to Streptavidin, while a second anti-CRP antibody was conjugated to either HRP or Alkaline Phophatase. CRP standards were used to generate a standard curve. The antibody mix (capture antibody plus detection antibody) and sample were added to the wells of the microplate, and incubated for one hour at room temperature. The graph on the left shows HRP detection using TMB substrate, while the graph on the right shows the detection of alkaline phosphatase using PNPP. The concentration of CRP-spiked samples was calculated from the standard curve. Intra-assay %CV (n=24) was determined for 800, 200 and 50pg/ml CRP.



CRP depleted human serum was spiked with 250pg/ml CRP and serial dilutions of serum were made and loaded to a clear 96 well stripwell plate in the presence of anti CRP-streptavidin capture antibody and anti-CRP-HRP or AP detection antibody. A standard curve using known amounts of CRP was also loaded to the plate. HRP and AP were detected using TMB and PNPP respectively. Once the standard curve had been fitted, the CRP concentrations of the samples added to the plate were determined by interpolating the measured absorbance. For all dilutions, the calculated CRP amount was within 10% the real value.

PRODUCTS AVAILABLE

DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
FlexLISA® HRP	1 x 96 well black stripwell plate	4200-0030
FlexLISA® HRP	1 x 96 well clear stripwell plate	4200-0010
FlexLISA® AP	1 x 96 well black stripwell plate	4200-0040
FlexLISA® AP	1 x 96 well clear stripwell plate	4200-0020

Streptavidin Conjugates

Streptavidin has an extremely high binding affinity for biotin, which can be exploited to offer a powerful secondary method of detection when the streptavidin is conjugated to a fluorescent protein, enzyme or gold nanoparticle.

Expedeon offers a range of streptavidin conjugates manufactured using our world-renowned Lightning-Link® and InnovaCoat® GOLD conjugation technologies.

All of the detection labels within our range of conjugates are covalently linked to streptavidin, forming highly stable conjugates with a long shelf life.

PRODUCTS AVAILABLE

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE	
		100µg	1mg
Streptavidin Enzyme Conjugates	Streptavidin-Alkaline Phosphatase (AP)	2011-0100	2011-1000
	Streptavidin-HRP	2010-0100	2010-1000
Streptavidin Fluorescent Conjugates	Streptavidin-Fluorescein	2014-0100	2014-1000
	Streptavidin-RPE	2012-0100	2012-1000

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE	
		0.2ml	1ml
Streptavidin Gold Conjugates	10nm Streptavidin gold conjugate (10OD)	252-0200	252-1000
	20nm Streptavidin gold conjugate (10OD)	251-0200	251-1000
	40nm Streptavidin gold conjugate (10OD)	250-0200	250-1000

PRODUCT DESCRIPTION	UNIT SIZE AND PRODUCT CODE	
	MINI vial	MIDI vial
Europium-Streptavidin Conjugates	1220-0001	1220-0120

PRODUCT DESCRIPTION	UNIT SIZE AND PRODUCT CODE
	20mg
Biotinylated-BSA	2050-0020

Europium-Streptavidin Conjugates

Product Code MINI kit: 1220-0001
MIDI kit: 1220-0120

Our Europium (Eu) Streptavidin conjugates are manufactured using covalent attachment of streptavidin to the specially treated surface of 200nm Eu particles. The surface treatment of the particles makes the conjugates resistant to aggregation and the extremely broad Stokes shift of the Eu chelate particle allows you to reach a higher sensitivity in your immunoassay, preventing non-specific fluorescence interference.

KEY BENEFITS

- Highly stable, easy to use conjugates
- Resistant to aggregation
- No sonication, shaking or vortexing required
- No need for blocking solution
- Possibility to work with low conjugate concentrations
- Conjugates can be run on an immunochromatographic assay as well as a microwell-based assay*
- Lyophilized for easy shipping and long term storage

SPECIFICATIONS

Material: Polystyrene
Appearance: White
Dye: Europium chelate
Specificity: Biotin
Excitation: 365nm
Emission: 610nm
Format: Lyophilized
Product size: 1 Mini and 1 Midi vial
Storage: -20°C

*Detection of europium conjugates in a lateral flow assay will require either a fluorescence strip reader or an UV transilluminator.

COMPARISON DATA

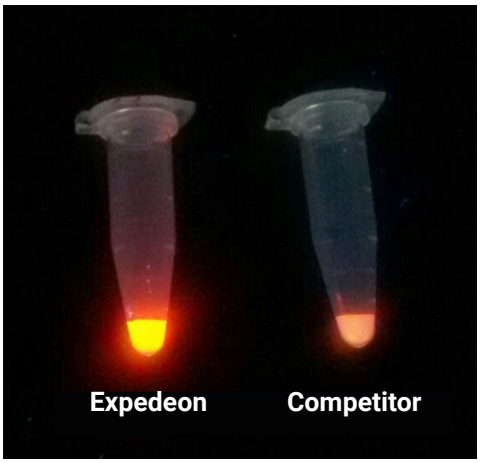


Figure 1

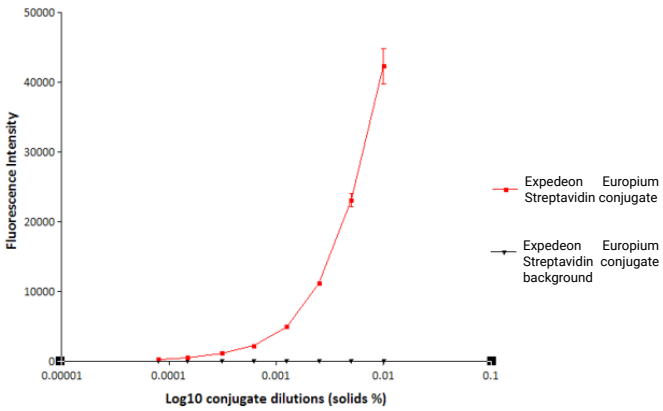


Figure 2

Figure 1. brighter than the competitor product under UV excitation.

Figure 2. Typical ELISA data with a time-resolved fluorescence (TRF) readout. Varying dilutions of Expedeon's Europium-Streptavidin conjugate were added to a plate coated with biotinylated ovalbumin, and detected using a plate reader.

When excited with UV light, the Eu chelate particle shows a maximal absorbance at 365nm and emits at 610 nm. The large Stokes shift leads to a low background signal and makes the conjugated particles ideal for immunochromatographic assays as well as microwell-based assays.

Thanks to the extended lifetime of approximately 0.5 milliseconds, the 200nm Eu Streptavidin conjugate can be used in a wide range of time-resolved fluorescence applications for the indirect detection of antigens and DNA targets in many biotin/streptavidin interaction based assays.

Check&Go! Kits

SCAN-TO-ORDER

Our Check&Go! Range of products enable the quick and easy confirmation that your antibody has successfully conjugated to your label. They are all unique product to Expedeon. The range contains:

- Conjugate Check&Go! Kit – for confirming of successful labeling to colored labels such as fluorescent dyes & proteins, latex and gold nanoparticles
- Biotin Check&Go! Kit – for confirming successful biotinylation
- HRP Check&Go! Kit – for confirming successful labeling to Horseradish Peroxidase

Conjugate Check&Go!

30 strips. Product Code: 4002-0030

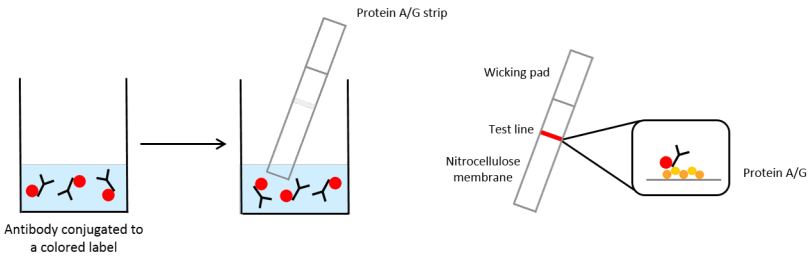
KEY BENEFITS

- Quickly check the success of your conjugation (only 10 minutes!)
- Easy to use
- No costly equipment required
- Compatible with antibody conjugates generated using our Lightning-Link® fluorescent labeling kits and our InnovaCoat® GOLD and LATEX conjugation kits
- Compatible with any other conjugation technology that uses colored labels
- Requires only small volumes (40ul of diluted conjugate)
- Unique to Expedeon

HOW IT WORKS

The key component of the kit is a nitrocellulose membrane containing a 'Test line' of immobilized Protein A and Protein G called a "half strip".

Both Protein A and Protein G have a high affinity for the Fc region of a variety of IgG molecules. The "half strips" also contain an absorbent pad to promote and control the flow of sample through the nitrocellulose. This simple qualitative lateral flow assay does not require any specialized or costly equipment.



When the antibody conjugate is run on the Conjugate Check&Go! strip, it flows along the nitrocellulose, binding to the Protein A and Protein G concentrated on the Test line. When the antibody is successfully conjugated to a colored label, a visible line appears on the strip.

Biotin Check&Go!

30 strips Product Code: 4001-0030

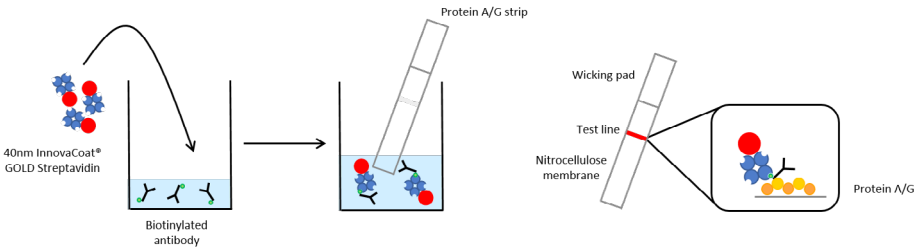
KEY BENEFITS

- Quickly check the success of your conjugation (only 10 minutes!)
- Easy to use and no costly equipment required
- Compatible with antibody conjugates generated using our Lightning-Link® Biotin antibody labeling kits and other biotin labeling technologies available commercially
- Requires only small volumes (20ul of diluted conjugate)

Biotin Check&Go! allows scientists to confirm the success of their antibody biotinylation in one easy step.

Unlike traditional methods of assessing the success of biotinylation, such as the HABA assay, which can be tedious and time consuming, Biotin Check&Go! is a simple immunochromatography test that requires only 10 minutes of your time and very small quantities of your antibody conjugate.

The key components of the kit include a nitrocellulose membrane containing a Test line of immobilized Protein A and Protein G, both which have a high affinity for the Fc region of a variety of IgG molecules, and a 40nm InnovaCoat® GOLD Streptavidin conjugate for detection.



When the biotinylated antibody is mixed with the streptavidin-gold conjugate it forms a complex that flows along the nitrocellulose membrane. Upon binding to the Protein A and Protein G concentrated on the Test line, a visible red line appears on the strip.

HRP Check&Go!

30 strips Product Code: 4002-0030

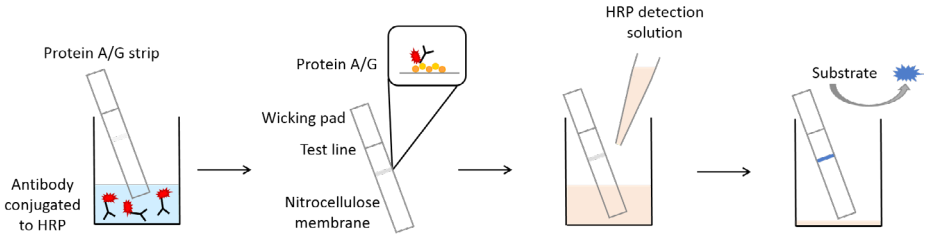
For confirming successful labeling to Horseradish Peroxidase.

KEY BENEFITS

- Quickly check the success of your conjugation (only 25 minutes!)
- Easy to use and no costly equipment required
- Sensitive – range of detection is between 0.5ng/ml-10ng/ml
- Compatible with antibody conjugates generated using our Lightning-Link® HRP antibody labeling kits, or any other HRP conjugation technologies available commercially
- Requires only small volumes (40ul of diluted conjugate)

The key component of the kit is a nitrocellulose membrane containing a Test line of immobilized Protein A and Protein G called a half strip. The HRP-antibody conjugate is run on the Protein A/G Strip. The conjugate binds the Protein A and Protein G concentrated on the Test line.

After the addition of the HRP detection solution, a visible line on the strip appears.



Maleimide Activated Labels & Thiol Kits

Maleimide activated labels are designed for the conjugation of the desired label to either antibodies, proteins, peptides or ligands that contain a sulfhydryl (-SH) group. The reactive maleimide groups that have been added to the label allows conjugation reactions to be performed very efficiently at physiological pH for superior performance.

KEY BENEFITS

- **Compatible protein thiolation kit available** – no specialist knowledge required
- **Covalent bond** – highly stable conjugates
- **Maleimide activated labels can be used with a range of biomolecules, including oligonucleotides** – flexible
- **Scalable** – easy transfer from R&D to manufacturing
- **Stringently QC tested** – consistent high quality, excellent batch-to-batch reproducibility
- **Traditional, well-known conjugation chemistry** – trusted method
- **Supplied as freeze dried formulations, therefore shipping on dry ice isn't necessary.**

PRODUCTS AVAILABLE

DESCRIPTION	PRODUCT CODE	
	2mg	5mg
Maleimide-HRP	401-0002	401-0005
Maleimide-Alkaline Phosphatase	402-0002	402-0005
Maleimide-R Phycoerythrin	403-0002	403-0005
Maleimide-Allophycocyanin-XL	404-0002	-
Maleimide-Streptavidin	405-0002	405-0005
Maleimide-Ovalbumin	407-0002	407-0005
Maleimide-BSA	408-0002	408-0005
Maleimide-KLH	409-0002	409-0005

Thiol Kits

Our Thiolation Kits allow thiols to be introduced easily into proteins and other biomolecules. Our stabilized thiol detection reagent allows the successful introduction of thiols (or presence of thiols) to be confirmed and quantified prior to conjugation with a maleimide activated label.

Protein Thiolation Kit

Product Code: 2mg 419-0002
5mg 419-0005

Designed to facilitate the conjugation of proteins to our maleimide-activated labels. Simply add your protein solution to the lyophilized thiolation reagents to activate your protein. These kits are designed to activate 2mg or 5mg of your protein. Each thiolation kit is also supplied with a thiolation detection kit provided as a positive test for protein thiolation, giving you the option to confirm the chemistry is working.

Thiol quantification kit (192 assays)

Product Code: 418-0002

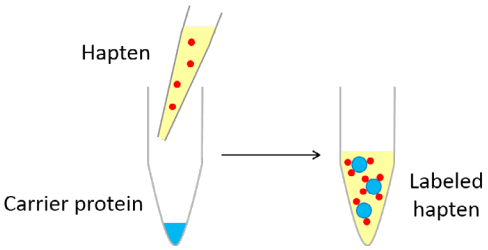
The thiol quantification assay kit allows you to quantify the amount of thiol/sulfhydryl (-SH) groups in samples of thiolated proteins or antibodies. Quantifying the number of free thiols in a sample can be useful in a number of applications and allows for a more controlled conjugation reaction. The assay is in a convenient 96-well plate format and contains all the necessary reagents required.

imm-Link™ Immunogen Preparation Kits

SCAN-TO-ORDER

Our Imm-Link™ immunogen kits allow the conjugation of your hapten to BSA, KLH or Ovalbumin. Simply add a solution of the hapten to a lyophilized mixure containing the carrier protein and the required conjugation chemistry. There are three different chemistries available - carboxyl, sulfhydryl and amine - perfect for preparing antigens for immunization.

HOW IT WORKS



KEY BENEFITS

- Easy to use
- All components supplied
- Wide range of chemistries
- Only 20-30 seconds hands on time to set up conjugation reaction
- Supplied dialysis cartridge ensures conjugates are recovered in high yield
- Full technical support available

Simply add a solution of the hapten to a proprietary lyophilized mixture containing the carrier protein and all the required conjugation chemistry.

Upon dissolution of the imm-Link™ mixture proprietary chemicals in the mixture become activated, resulting in the coupling of the hapten to the carrier protein in a gentle and controlled process. The hands-on time to set up the conjugation reaction is typically 20-30 seconds.

Once the conjugation reaction is complete the hapten carrier conjugate is dialysed with ease using the supplied dialysis cartridge to remove unwanted by-products from the conjugation reaction. The hapten conjugate can then be used for the purpose of antibody production. The design of the dialysis cartridge ensures that the hapten conjugate is recovered in high yield.

PRODUCTS AVAILABLE

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE			
		1 x 1mg reaction	1 x 2mg reaction	3 x 1mg reactions	3 x 2mg reactions
imm-Link™ Immunogen Kits for antigens with amine groups *Target Lysines or free amines (NH_2)*	KLH Immunogen Kit	-	450-0001	-	450-0500
	Ovalbumin Immunogen Kit	-	451-0001	-	451-0500
	BSA Immunogen Kit	-	452-0001	-	452-0500
imm-Link™ Immunogen Kits for antigens with Carboxyl groups *Target Glutamic acid, aspartic acid or free carboxyl groups*	KLH Immunogen Kit	-	470-0001	-	470-0500
	Ovalbumin Immunogen Kit	-	471-0001	-	471-0500
	BSA Immunogen Kit	472-0015	472-0001	472-0010	472-0500
imm-Link™ Immunogen Kits for antigens with Sulfhydryl Groups *Target Cysteines or free sulfhydryl groups*	KLH Immunogen Kit	-	460-0001	-	460-0500
	Ovalbumin Immunogen Kit	-	461-0001	-	461-0500
	BSA Immunogen Kit	-	462-0001	-	462-0500

Affinity Resins & Purification Kits

Commercially available antibodies often contain substances (e.g. BSA, glycine, tris, and azide) that interfere with labeling reactions.

We have developed a range of affinity resins and purification kits which allow for easy and rapid purification of antibodies from any buffer formulation, and which complement our Lightning-Link®, Thunder-Link® PLUS, InnovaCoat® and Latex Conjugation Kits.

The range also includes products for antibody purification from tissue culture supernatant (TCS), serum and ascites fluid; for concentration of antibodies and proteins; and for performing buffer exchanges.

Affinity Resins

RESINS AVAILABLE

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE	
		2ml	5ml
ATP Agarose	High (8-12 µmol/ml)	510-0002	510-0005
	Control Resin	520-0002A	-
GTP Agarose	High (>6 µmol/ml)	505-0001	505-0002
	Control Resin	520-0002G	-
Protein A Agarose	>4mg protein A/ml	851-0024	-
Protein G Agarose	>4mg protein G/ml	895-0024	-

PRODUCT DESCRIPTION		UNIT SIZE AND PRODUCT CODE
		5g
PiBind™ resin	A quick and easy way to remove contaminating Pi from buffers	501-0015

Purification Kits

Our range of purification kits can be used to:

- Concentrate antibodies and other proteins
- Exchange your buffer (pH, salt concentration)
- Remove buffer additives including:
  - ✓ BSA
  - ✓ Sodium Azide
  - ✓ Gelatin

KEY BENEFITS

- Purified antibody compatible with our conjugation kits (no dialysis required)
- Multiple species including mouse and rat specific kits
- High recovery (˜80-90%)
- Easy-to-use
- All components included
- Scale-up available

	Lightning-Link®	InnovaCoat® GOLD	Latex conjugation kits	Thunder-Link® PLUS
Antibody Concentration and Clean Up Kits	AbSelect™ Antibody Concentration and Clean Up Kit 861-0010	AbPure™ Antibody Concentration and Clean Up Kit 262-0010	Antibody Concentration and Clean Up Kit for Latex and Europium 1020-0040	AbSelect™ Antibody Concentration and Clean Up Kit 861-0010
BSA Removal Kits	AbSelect™ BSA Removal Kit 820-0100	AbPure™ BSA Removal Kit 263-0100	AbPure™ BSA Removal Kit 263-0100	AbSelect™ BSA Removal Kit 820-0100
AbPure™ Magnetic Purification Kit	AbPure™ Magnetic Purification Kit 265-0200			
Tissue Culture Supernatant (TCS) Purification Systems	AbSelect™ TCS Antibody Purification System 862- AbSelect™ Mouse TCS Antibody Purification System 832- AbSelect™ Rat TCS Antibody Purification System 842-	AbPure™ TCS Antibody Purification System 264-	AbPure™ TCS Antibody Purification System 264-	AbSelect™ TCS Antibody Purification System 862- AbSelect™ Mouse TCS Antibody Purification System 832- AbSelect™ Rat TCS Antibody Purification System 842-
Serum Purification Systems	AbSelect™ Serum Antibody Purification System 863- AbSelect™ G Serum Antibody Purification System 893-	N/A	N/A	AbSelect™ Serum Antibody Purification System 863- AbSelect™ G Serum Antibody Purification System 893-
AbSelect™ and AbPure™ Antibody Purification Systems	AbSelect™ Antibody Purification System 860- AbSelect™ G Antibody Purification System 890- AbSelect™ Mouse Antibody Purification System 830-	AbPure™ Antibody Purification System 260- AbPure™ Mouse Antibody Purification System 261-	AbPure™ Antibody Purification System 260- AbPure™ Mouse Antibody Purification System 261-	AbSelect™ Antibody Purification System 860- AbSelect™ G Antibody Purification System 890- AbSelect™ Mouse Antibody Purification System 830-

Antibody Purification Kits overview. Where more than one pack size is available, only the product code prefix is given. For any questions regarding our products please contact us: info@expedeon.com

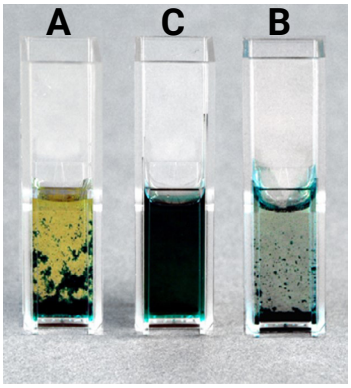
ATPase & GTPase assay kits

SCAN-TO-ORDER

At the heart of this range of assay kits is PiColorLock™, a universal phosphate detection reagent for all phosphate-generating enzymes which forms colored complexes that are stable for hours.

KEY BENEFITS

- Colorimetric (non-radioactive) assay
- Special additives speed up color development and suppress non-enzymatic backgrounds with acid-labile substrates (e.g. ATP, GTP)
- Ultra-stable phosphate-dye complexes which last for hours
- Compatible with almost any assay buffer
- Compatible with multiple enzyme targets in drug discovery
- Long shelf life

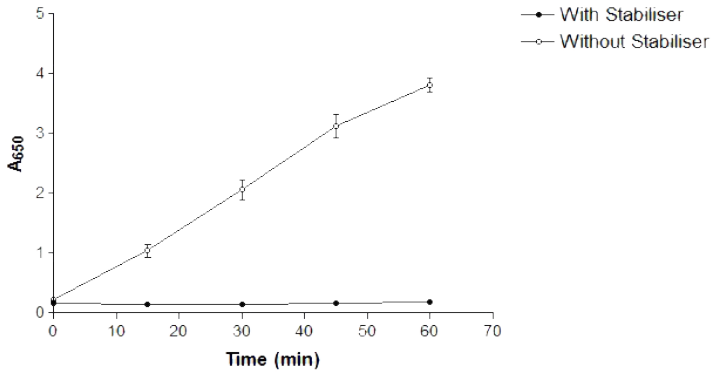


A = Competitor A

B = Competitor B

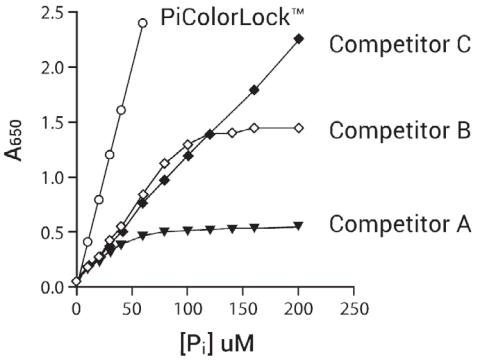
C = PiColorLock™

Competitor assays suffer from several problems including reagent precipitation. PiColorLock™ ensures high stability of the colored dye-phosphate complexes (green color).

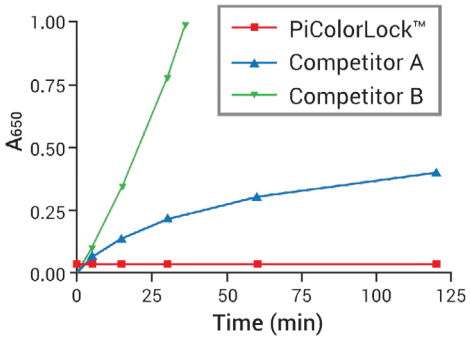


The PiColorLock™ reagent is often used with unstable substrates (e.g. ATP, GTP) that give rise to non-enzymatic background drift with time. The unique stabilizer, provided in the PiColorLock™ phosphate detection system, blocks this non-enzymatic breakdown generating a stable low background. The stable signal can therefore be read up to several hours after the reaction has ended.

COMPARISON DATA



PiColorLock™ has been designed to have a large linear range, thus reducing the need for sample dilution. Competitors' products are linear over a much narrower range of concentrations.



ATP has been incubated in three phosphate detection reagents. A steadily rising non-enzymatic background signal is seen with competitor reagents, whereas PiColorLock™ gives baseline readings.

PICOLORLOCK™ DETECTION REAGENT	UNIT SIZE AND PRODUCT CODE	
	625/1560 assays	2500/6250 assays
	303-0030	303-0125

PiColorLock™ is a phosphate detection reagent for measuring the activity of phosphatases, ATPases, GTPases and other enzymes that release inorganic phosphate (Pi). The reagent comes with with an Accelerator, Stabilizer and Pi Standard, ideal for high throughput screening.

ATPASE AND GTPASE ASSAY KITS	UNIT SIZE AND PRODUCT CODE	
	192 assays	480 assays
High Throughput Colorimetric ATPase Assays (inc. PiColorLock™)	601-0120	601-0121
High Throughput Colorimetric GTPase Assays (inc. PiColorLock™)	602-0120	602-0121

These non-radioactive colorimetric assay kits use a 96 well format. All the necessary reagents are supplied for measuring enzyme activity.

LYOPHILIZED ATP & GTP VIALS	UNIT SIZE AND PRODUCT CODE
	0.5ml per vial
10mM Lyophilized ATP	601-9999
10mM Lyophilized GTP	602-9999

Ultra high quality ATP and GTP to ensure the lowest possible assay background. Just reconstitute by adding water, avoid multiple freeze-thaw cycles to ensure high performance ATP and GTP in your assay.

PIBIND™ RESIN	Unit Size and Product Code
	5g
	501-0015

PiBind™ resin provides a remarkably quick and easy way to remove contaminating Pi from buffers therefore reducing high assay backgrounds. The resin works over a broad range of pH values and is unaffected by many commonly used buffer additives.

official distributor

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