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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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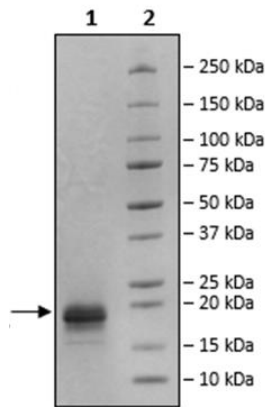


Product Information

Description:	Recombinant IL-5 (Interleukin 5), encompassing amino acids 20-134(end). This construct contains an N-terminal His-tag (6xHis) followed by an Avi-Tag™. This protein is enzymatically biotinylated using Avi-Tag™ technology and affinity purified.
Background:	IL-5 (interleukin-5) is a pro-inflammatory protein that functions as an intermediary cytokine in the T _H 2 (T helper 2) cells response in asthma and other eosinophilic allergic diseases. IL-5 functions by promoting eosinophil maturation, activation, and migration into target tissues. It binds to the IL-5 specific cell surface receptor IL-5RA (IL-5 receptor alpha) and further recruits the common beta chain receptor (CSF2RB) to initiate downstream signaling through JAK1/2 (Janus kinase 1/2) and STAT5. Activated eosinophils contribute to airway damage through degranulation, resulting in the release of pro-inflammatory cytokines and enzymatic mediators contributing to local inflammation and tissue damage. IL-5 signaling plays a critical role in allergic and eosinophilic asthma subtypes and has been an active area for drug discovery. Antibodies targeting both IL-5 ligand and CD125, also known as IL-5 Receptor (IL-5RA), are FDA (Food and Drug Administration) approved for the treatment of severe eosinophilic asthma and other eosinophilic conditions. These antibodies function by neutralizing IL-5-mediated signaling in eosinophils. Additionally, IL-5RA targeting antibodies and CAR (chimeric antigen receptor)-T cells can induce immune-mediated cytotoxicity of IL-5RA-expressing cells, including eosinophils through ADCC (antibody-dependent cellular cytotoxicity) and CAR-T cell mediated killing respectively.
Species:	Human
Construct:	IL-5 (His-Avi-20-134(end))-(Biotin)
Concentration:	1.85 mg/ml
Expression System:	HEK293
Purity:	≥90%
Format:	Aqueous buffer solution.
Formulated In:	8 mM phosphate pH 7.4, 110 mM NaCl, 2.2 mM KCl, and 20% glycerol.
MW:	16 kDa + glycans
Glycosylation:	This protein runs at a higher MW by SDS-PAGE due to glycosylation.
Label:	This protein is enzymatically biotinylated using Avi-Tag™ technology. Biotinylation is confirmed to be ≥90%.
Genbank Accession:	NM_000879.3
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	A 96-well plate was coated with IL-5, His-Avi-Tag, Biotin-Labeled Recombinant (250 ng/well in PBS) at 4°C overnight. The plate was washed three times with PBST, and 200 µl Blocking Buffer 2 was added for 2 hours at room temperature (RT). After three washes with PBST, a 1:2 serial dilution of CD125 (IL-5Ra), Fc Fusion (IgG1), Avi-Tag Recombinant (#101050) protein prepared in PP-02 Assay Buffer (#82620), was added and the plate was incubated at RT for 1 hour. The plate was washed three times and incubated with Anti-human Fc-HRP conjugate diluted 1:1000 in Blocking Buffer 2 for 1 hour at RT. After three washes, 100 µl of the ELISA ECL Substrate (#79670) was added to each well and chemiluminescence was measured.
Applications:	Useful for binding assays.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



IL-5:IL-5Ra Binding Activity

