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- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## CAMK2A & SMAD2 Protein Protein Interaction Antibody Pair

Catalog # : DI0543

規格 : [ 1 Set ]

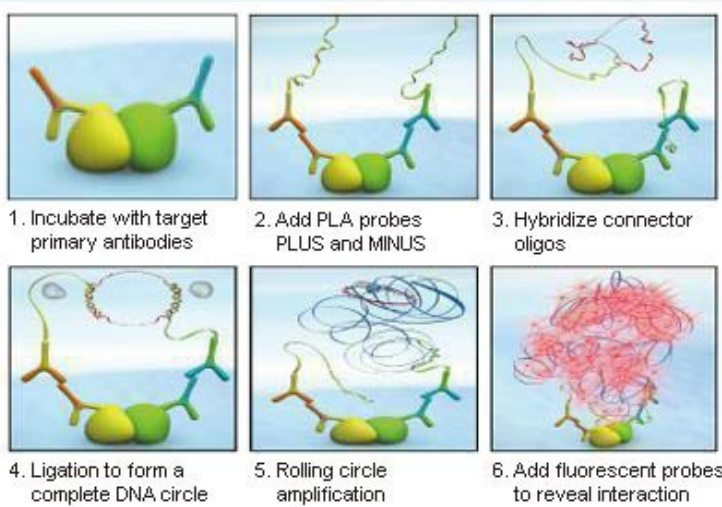
List All

### Specification

**Product Description:** This protein protein interaction antibody pair set comes with two antibodies to detect the protein-protein interaction, one against the CAMK2A protein, and the other against the SMAD2 protein for use in *in situ* Proximity Ligation Assay. See Publication Reference below.

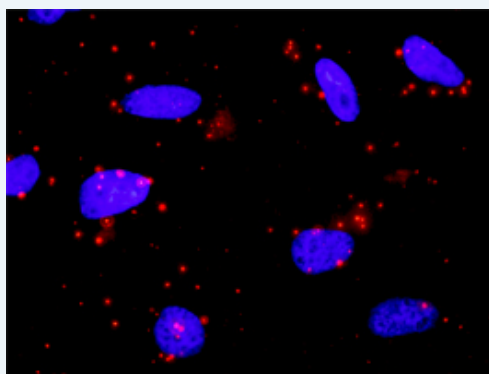
### Application Image

*In situ* Proximity Ligation Assay (Cell)



**Reactivity:** Human

**Quality Control Testing:** Protein protein interaction immunofluorescence result.



Representative image of Proximity Ligation Assay of protein-protein interactions between CAMK2A and SMAD2. HeLa cells were stained with anti-CAMK2A rabbit purified polyclonal antibody 1:1200 and anti-SMAD2 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware ([BlobFinder](#)) download from The Centre for Image Analysis at Uppsala University.

**Supplied Product:** Antibody pair set content:  
 1. CAMK2A rabbit purified polyclonal antibody (20 ug)  
 2. SMAD2 mouse monoclonal antibody (40 ug)  
 \*Reagents are sufficient for at least 30-50 assays using recommended protocols.

**Storage Instruction:** Store reagents of the antibody pair set at -20°C or lower. Please aliquot to avoid repeated freeze thaw cycle. Reagents should be returned to -

**MSDS:**[Download](#)**Publication Reference**

1. An analysis of protein-protein interactions in cross-talk pathways reveals CRKL as a novel prognostic marker in hepatocellular carcinoma. Liu CH, Chen TC, Chau GY, Jan YH, Chen CH, Hsu CN, Lin KT, Juang YL, Lu PJ, Cheng HC, Chen MH, Chang CF, Ting YS, Kao CY, Hsiao M, Huang CY. Mol Cell Proteomics. 2013 Feb 8. [Epub ahead of print]

**Applications*****In situ* Proximity Ligation Assay (Cell)**CAMK2A SMAD2**Gene Information****Entrez GeneID:** 815**Gene Name:** CAMK2A**Gene Alias:** CAMKA,KIAA0968**Gene Description:** calcium/calmodulin-dependent protein kinase II alpha**Omim ID:** 114078**Gene Ontology:** [Hyperlink](#)

**Gene Summary:** The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Two transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq]

**Other Designations:** CaM kinase II alpha subunit,CaM-kinase II alpha chain,CaMK-II alpha subunit,CaMKIIAlpha,OTTHUMP00000165787,OTTHUMP00000165788,calcium/calmodulin-dependent protein kinase (CaM kinase) II alpha,calcium/calmodulin-dependent protein kinase II alpha-B subunit

**Gene Information****Entrez GeneID:** 4087**Gene Name:** SMAD2**Gene Alias:** JV18,JV18-1,MADH2,MADR2,MGC22139,MGC34440,hMAD-2,hSMAD2**Gene Description:** SMAD family member 2**Omim ID:** 601366**Gene Ontology:** [Hyperlink](#)**Gene Summary:** The protein encoded by this gene belongs to the SMAD, a family of

proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq]

**Other Designations:** MAD, mothers against decapentaplegic homolog 2, Mad protein homolog, Mad, mothers against decapentaplegic homolog 2, Mad-related protein 2, SMAD, mothers against DPP homolog 2, Sma- and Mad-related protein 2, mother against DPP homolog 2

Interactome

