ACTN1 & CAMK2A Protein Protein Interaction Antibody Pair

Catalog # DI0110 Size 1 Set

Applications



Representative image of Proximity Ligation Assay of protein-protein interactions between ACTN1 and CAMK2A. HeLa cells were stained with anti-ACTN1 rabbit purified polyclonal antibody 1:1200 and anti-CAMK2A 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.

Specification	
Product Description	This protein protein interaction antibody pair set comes with two antibodies to detect the protein-prot ein interaction, one against the ACTN1 protein, and the other against the CAMK2A protein for use in <i>in situ</i> Proximity Ligation Assay. See Publication Reference below.
Reactivity	Human
Quality Control Testing	Protein protein interaction immunofluorescence result. Representative image of Proximity Ligation Assay of protein-protein interactions between ACTN1 an d CAMK2A. HeLa cells were stained with anti-ACTN1 rabbit purified polyclonal antibody 1:1200 and anti-CAMK2A mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-pr otein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) dow nload from The Centre for Image Analysis at Uppsala University.
Supplied Product	Antibody pair set content: 1. ACTN1 rabbit purified polyclonal antibody (100 ug) 2. CAMK2A 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 tha w cycle. Reagents should be returned to -20°C storage immediately after use.

Applications

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• In situ Proximity Ligation Assay (Cell)

Gene Info — ACTN1	
Entrez GenelD	<u>87</u>
Gene Name	ACTN1
Gene Alias	FLJ40884
Gene Description	actinin, alpha 1
Omim ID	<u>102575</u>
Gene Ontology	Hyperlink
Gene Summary	Alpha actinins belong to the spectrin gene superfamily which represents a diverse group of cytosk eletal proteins, including the alpha and beta spectrins and dystrophins. Alpha actinin is an actin-bi nding protein with multiple roles in different cell types. In nonmuscle cells, the cytoskeletal isoform i s found along microfilament bundles and adherens-type junctions, where it is involved in binding a ctin to the membrane. In contrast, skeletal, cardiac, and smooth muscle isoforms are localized to t he Z-disc and analogous dense bodies, where they help anchor the myofibrillar actin filaments. Th is gene encodes a nonmuscle, cytoskeletal, alpha actinin isoform and maps to the same site as th e structurally similar erythroid beta spectrin gene. Three transcript variants encoding different isof orms have been found for this gene. [provided by RefSeq
Other Designations	F-actin cross-linking protein actinin 1 smooth muscle alpha-actinin 1

Gene Info — CAMK2A		
Entrez GenelD	<u>815</u>	
Gene Name	CAMK2A	
Gene Alias	CAMKA, KIAA0968	
Gene Description	calcium/calmodulin-dependent protein kinase II alpha	
Omim ID	<u>114078</u>	
Gene Ontology	<u>Hyperlink</u>	

😚 Abnova	Product Information
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 com posed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this ge ne 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, resul ting in CaM-independent activity. Two transcript variants encoding distinct isoforms have been id entified for this gene. [provided by RefSeq
Other Designations	CaM kinase II alpha subunit CaM-kinase II alpha chain CaMK-II alpha subunit CaMKIINalpha OTT HUMP00000165787 OTTHUMP00000165788 calcium/calmodulin-dependent protein kinase (Ca M kinase) II alpha calcium/calmodulin-dependent protein kinase II alpha-B subunit

Pathway

- Adherens junction
- <u>Arrhythmogenic right ventricular cardiomyopathy (ARVC)</u>
- <u>Calcium signaling pathway</u>
- ErbB signaling pathway
- Focal adhesion
- <u>Glioma</u>
- GnRH signaling pathway
- Leukocyte transendothelial migration
- Long-term potentiation
- <u>Melanogenesis</u>
- Neurotrophin signaling pathway
- Olfactory transduction
- <u>Regulation of actin cytoskeleton</u>
- Systemic lupus erythematosus
- Tight junction
- Wnt signaling pathway



Disease

- Bipolar Disorder
- <u>Cleft Lip</u>
- <u>Cleft Palate</u>
- <u>Cognition</u>
- Genetic Predisposition to Disease
- Schizophrenia
- <u>Schizophrenic Psychology</u>
- <u>Tobacco Use Disorder</u>
- Weight Gain