

# KChIP2 Rabbit pAb

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Catalog # AP59257

## Product Information

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<b>Application</b>	WB, IHC-P, IHC-F, IF, E
<b>Primary Accession</b>	<a href="#">Q9NS61</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Mouse, Rat, Chicken, Pig, Horse, Rabbit, Sheep
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	30907
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human KChIP2
<b>Epitope Specificity</b>	1-100/270
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Cell membrane.
<b>SIMILARITY</b>	Belongs to the recoverin family. Contains 4 EF-hand domains.
<b>SUBUNIT</b>	Component of heteromultimeric potassium channels. The KCND2-KCNIP2 channel complex contains four KCND2 and four KCNIP2 subunits. Interacts with KCND2. Isoform 1 and isoform 3 interact with KCND3 isoform 1. Probably part of a complex consisting of KCNIP1, KCNIP2 isoform 3 and KCND2. At least isoform 2 and isoform 3 can self-associate to form homodimers and homotetramers. Isoform 3 interacts with KCNIP1 in a calcium-dependent manner.
<b>Post-translational modifications</b>	Palmitoylated. Palmitoylation enhances association with the plasma membrane (By similarity).
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	The downstream regulatory element, DRE, acts as a location-dependent gene silencer. DREAM (for DRE-antagonist modulator) is a Ca <sup>2+</sup> -regulated transcriptional repressor that specifically binds to the DRE. DREAM regulates transcription of prodynorphin and c-Fos genes and shows 99% nucleotide homology to the Kv channel-interacting proteins (KChIPs). KChIP family members include KChIP1, which is expressed in brain, KChIP2, which is expressed in heart, brain, and lung, KChIP3 (also designated calsenilin), which is expressed in brain and testis and KChIP4.

## Additional Information

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<b>Gene ID</b>	30819
<b>Other Names</b>	A-type potassium channel modulatory protein KCNIP2, Cardiac voltage-gated potassium channel modulatory subunit, Kv channel-interacting protein 2,

<b>Target/Specificity</b>	Expressed in brain. Colocalizes with KCND2 in excitatory neurons including cortical and hippocampal CA1 pyramidal cells. Isoform 3 is expressed in heart and in umbilical vein endothelial cells. Not expressed in fetal heart.
<b>Dilution</b>	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
<b>Storage</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Protein Information

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<b>Name</b>	KCNIP2 ( <a href="#">HGNC:15522</a> )
<b>Function</b>	Regulatory subunit of Kv4/D (Shal)-type voltage-gated rapidly inactivating A-type potassium channels (PubMed: <a href="#">10676964</a> , PubMed: <a href="#">11287421</a> , PubMed: <a href="#">11684073</a> , PubMed: <a href="#">12297301</a> , PubMed: <a href="#">14623880</a> , PubMed: <a href="#">34997220</a> ). Modulates channel density, inactivation kinetics and rate of recovery from inactivation in a calcium-dependent and isoform- specific manner (PubMed: <a href="#">10676964</a> , PubMed: <a href="#">11287421</a> , PubMed: <a href="#">11684073</a> , PubMed: <a href="#">12297301</a> , PubMed: <a href="#">14623880</a> , PubMed: <a href="#">34997220</a> ). Involved in KCND2 and KCND3 trafficking to the cell surface (PubMed: <a href="#">12829703</a> ). May be required for the expression of I(To) currents in the heart (By similarity).
<b>Cellular Location</b>	[Isoform 1]: Cell membrane {ECO:0000250 UniProtKB:Q9JM59}; Lipid-anchor {ECO:0000250 UniProtKB:Q9JM59}. Note=Detected on lipid rafts (By similarity). {ECO:0000250 UniProtKB:Q9JM59} [Isoform 6]: Cell membrane {ECO:0000250 UniProtKB:Q9JM59}; Lipid-anchor {ECO:0000250 UniProtKB:Q9JM59}
<b>Tissue Location</b>	Expressed in brain. Colocalizes with KCND2 in excitatory neurons including cortical and hippocampal CA1 pyramidal cells. Isoform 3 is expressed in heart and in umbilical vein endothelial cells. Not expressed in fetal heart

## Background

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The downstream regulatory element, DRE, acts as a location-dependent gene silencer. DREAM (for DRE-antagonist modulator) is a Ca<sup>2+</sup>-regulated transcriptional repressor that specifically binds to the DRE. DREAM regulates transcription of prodynorphin and c-Fos genes and shows 99% nucleotide homology to the Kv channel-interacting proteins (KChIPs). KChIP family members include KChIP1, which is expressed in brain, KChIP2, which is expressed in heart, brain, and lung, KChIP3 (also designated calsenilin), which is expressed in brain and testis and KChIP4.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.