

Kv4.2 (Phospho Ser616) Rabbit pAb

CatalogNo: YP1005

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- IHC, IF, ELISA

MW

- 71kD (Calculated)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

IHC 1:100-1:300

ELISA 1:5000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho-peptide around the phosphorylation site of human Kv4.2 (phospho Ser616)

Specificity Phospho-Kv4.2 (S616) Polyclonal Antibody detects endogenous levels of Kv4.2 protein only when phosphorylated at S616. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): PEsPE

| Target Information

Gene name KCND2

Protein Name Potassium voltage-gated channel subfamily D member 2

Organism	Gene ID	UniProt ID
Human	3751 ;	Q9NZV8 ;
Mouse	16508 ;	Q9Z0V2 ;
Rat	65180 ;	Q63881 ;

**Cellular
Localization**

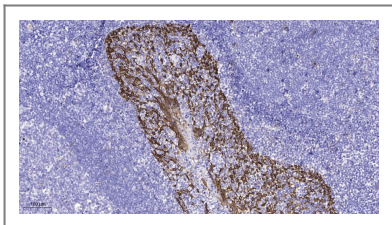
Cell membrane ; Multi-pass membrane protein . Cell projection , dendrite . Cell junction , synapse . Perikaryon . Cell junction , synapse , postsynaptic cell membrane . Cell projection , dendritic spine . Cell junction . In neurons , primarily detected on dendrites , dendritic spines and on the neuron cell body , but not on axons. Localized preferentially at the dendrites of pyramidal cells in the hippocampus CA1 layer. Detected at GABAergic synapses. Detected at cell junctions that are distinct from synaptic cell contacts. Detected in lipid rafts. Detected primarily at the endoplasmic reticulum or Golgi when expressed by itself (PubMed:15454437) . Interaction with KCNIP1 , KCNIP2 , KCNIP3 or KCNIP4 promotes expression at the cell membrane (PubMed:15454437 , PubMed:24811166) . Interaction with DPP6 or DPP10 promotes expression at the cell membrane (By similarity) . Internalized from the cell membrane by clathrin-dependent endocytosis in response to activation of AMPA-selective glutamate receptors and PKA-mediated phosphorylation at Ser-552. Redistributed from dendritic spines to the main dendritic shaft in response to activation of AMPA-selective glutamate receptors and activation of PKA (By similarity) . .

Tissue specificity Detected in ovary , in corpus luteum and in granulosa and theca cells in the follicle (at protein level) (PubMed:15991246) . Highly expressed throughout the brain (PubMed:10551270 , PubMed:10729221) . Detected in amygdala , caudate nucleus , cerebellum , hippocampus , substantia nigra and thalamus (PubMed:10551270 , PubMed:10729221) . Expression is not detectable or very low in heart , kidney , liver , lung , pancreas and skeletal muscle (PubMed:10551270 , PubMed:10729221) . Not detectable in human heart atrium (PubMed:12395204) .

Function

Domain:The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position. ,Function:Pore-forming (alpha) subunit of voltage-gated rapidly inactivating A-type potassium channels. May contribute to I (To) current in heart and I (Sa) current in neurons. Channel properties are modulated by interactions with other alpha subunits and with regulatory subunits. ,PTM:Phosphorylated on serine and threonine residues. ,similarity:Belongs to the potassium channel family. D (Shal) subfamily. ,subcellular location:Detected in dendrites in cultured hippocampal neurons. Association with KCNIP2 probably enhances cell surface expression. ,subunit:Homotetramer or heterotetramer with KCND1 and/or KCND3. Interacts with DPP6 , DLG4 and FREQ (By similarity) . Interacts with DLG1. Associates with the regulatory subunits KCNIP1 , KCNIP2 , KCNIP3 and KCNIP4. Probably part of a complex consisting of KCNIP1 , KCNIP2 isoform 3 and KCND2. The KCND2-KCNIP2 channel complex contains four KCND2 and four KCNIP2 subunits. Interacts with FLNA , FLNC and DPP10. ,tissue specificity:Highly expressed throughout the brain. Expression is very low or absent in other tissues. ,

| Validation Data



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA, pH 9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200 (room temperature, 45min).

| Contact information

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