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KChIP3 Antibody (N-term M1)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1572a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q9Y2W7
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB0527-0528
Calculated MW	29231
Antigen Region	1-30

Additional Information

Gene ID	30818
Other Names	Calsenilin, A-type potassium channel modulatory protein 3, DRE-antagonist modulator, DREAM, Kv channel-interacting protein 3, KChIP3, KCNIP3, CSEN, DREAM, KCHIP3
Target/Specificity	This KChIP3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human KChIP3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	KChIP3 Antibody (N-term M1) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNIP3
Synonyms	CSEN, DREAM, KCHIP3

Function	Calcium-dependent transcriptional repressor that binds to the DRE element of genes including PDYN and FOS. Affinity for DNA is reduced upon binding to calcium and enhanced by binding to magnesium. Seems to be involved in nociception (By similarity).
Cellular Location	Cytoplasm. Cell membrane; Lipid-anchor. Endoplasmic reticulum. Golgi apparatus. Nucleus. Note=Also membrane-bound, associated with the plasma membrane (PubMed:15485870). In the presence of PSEN2 associated with the endoplasmic reticulum and Golgi. The sumoylated form is present only in the nucleus.
Tissue Location	Highly expressed in brain. Widely expressed at lower levels. Expression levels are elevated in brain cortex regions affected by Alzheimer disease.

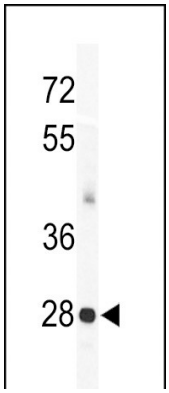
Background

KChIP3 is a member of the family of voltage-gated potassium (Kv) channel-interacting proteins (KCNIPs), which belong to the recoverin branch of the EF-hand superfamily. Members of the KCNIP family are small calcium binding proteins. They all have EF-hand-like domains, and differ from each other in the N-terminus. They are integral subunit components of native Kv4 channel complexes. They may regulate A-type currents, and hence neuronal excitability, in response to changes in intracellular calcium. This protein is also shown to function as a calcium-regulated transcriptional repressor, and to interact with presenilins. Mutations in the presenilin genes have been implicated in Alzheimer's disease. Due to utilization of an alternate in-frame translation start codon, the gene for this protein encodes two isoforms with different sizes.

References

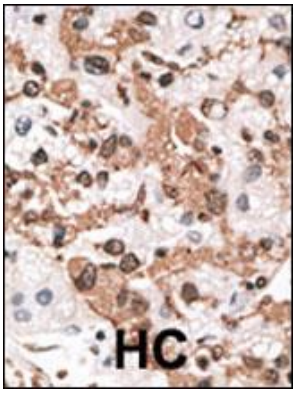
Choi, E.K., et al., Mol. Cell. Neurosci. 23(3):495-506 (2003).
Hong, Y.M., et al., Neurosci. Lett. 340(1):33-36 (2003).
Schrader, L.A., et al., J. Neurosci. 22(23):10123-10133 (2002).
Lilliehook, C., et al., Mol. Cell. Neurosci. 19(4):552-559 (2002).
Cheng, H.Y., et al., Cell 108(1):31-43 (2002).

Images

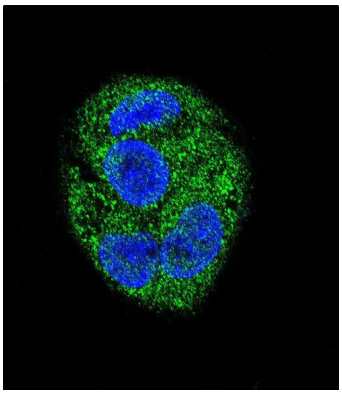


Western blot analysis of KChIP3 Antibody (N-term M1) (Cat.# AP1572a) in mouse heart tissue lysates (35ug/lane). KChIP3(arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human brain tissue reacted with KChIP3 Antibody (N-term M1) (Cat.#AP1572a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of KChIP3 Antibody (N-term M1) (Cat#AP1572a) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).