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Anti-KCNH1 Picoband Antibody

Catalog # ABO10137

Product Information

Application	WB
Primary Accession	O95259
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for KCNH1 detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3756
Other Names	Potassium voltage-gated channel subfamily H member 1, Ether-a-go-go potassium channel 1, EAG channel 1, h-eag, hEAG1, Voltage-gated potassium channel subunit Kv10.1, KCNH1
Calculated MW	111423
Application Details	Western blot, 0.1-0.5 □g/ml
Subcellular Localization	Cell membrane.
Tissue Specificity	Highly expressed in brain and in myoblasts at the onset of fusion, but not in other tissues. Detected in HeLa (cervical carcinoma), SH-SY5Y (neuroblastoma) and MCF-7 (epithelial tumor) cells, but not in normal epithelial cells.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Immunogen	A synthetic peptide corresponding to a sequence of human KCNH1 (AKRKSWARFKDACGKSEDWNKVSKAESMETLPERTKA).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	KCNH1 (HGNC:6250)
Function	Pore-forming (alpha) subunit of a voltage-gated delayed rectifier potassium channel that mediates outward-rectifying potassium currents which, on depolarization, reaches a steady-state level and do not inactivate (PubMed:10880439, PubMed:11943152, PubMed:22732247, PubMed:25420144, PubMed:25556795, PubMed:25915598, PubMed:27005320, PubMed:27325704, PubMed:27618660, PubMed:30149017, PubMed:9738473). The activation kinetics depend on the prepulse potential and external divalent cation concentration (PubMed:11943152). With negative prepulses, the current activation is delayed and slowed down several fold, whereas more positive prepulses speed up activation (PubMed:11943152). The time course of activation is biphasic with a fast and a slowly activating current component (PubMed:11943152). Activates at more positive membrane potentials and exhibit a steeper activation curve (PubMed:11943152). Channel properties are modulated by subunit assembly (PubMed:11943152). Mediates IK(NI) current in myoblasts (PubMed:9738473). Involved in the regulation of cell proliferation and differentiation, in particular adipogenic and osteogenic differentiation in bone marrow-derived mesenchymal stem cells (MSCs) (PubMed:23881642).
Cellular Location	Cell membrane; Multi-pass membrane protein. Nucleus inner membrane; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:Q63472}. Cell projection, axon {ECO:0000250|UniProtKB:Q63472}. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q63472}. Perikaryon {ECO:0000250|UniProtKB:Q63472}. Postsynaptic density membrane {ECO:0000250|UniProtKB:Q63472}. Early endosome membrane. Note=Perinuclear KCNH1 is located to NPC-free islands
Tissue Location	Highly expressed in brain and in myoblasts at the onset of fusion, but not in other tissues (PubMed:9738473). Detected in HeLa (cervical carcinoma), SH-SY5Y (neuroblastoma) and MCF-7 (epithelial tumor) cells, but not in normal epithelial cells

Background

Potassium voltage-gated channel subfamily H member 1 is a protein that in humans is encoded by the KCNH1 gene. Voltage-gated potassium (Kv) channels represent the most complex class of voltage-gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. This gene encodes a member of the potassium channel, voltage-gated, subfamily H. This member is a pore-forming (alpha) subunit of a voltage-gated non-inactivating delayed rectifier potassium channel. It is activated at the onset of myoblast differentiation. The gene is highly expressed in brain and in myoblasts. Overexpression of the gene may confer a growth advantage to cancer cells and favor tumor cell proliferation. Alternative splicing of this gene results in two transcript variants encoding distinct isoforms.