

## KCNH1 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP22343b

## Specification

# KCNH1 Antibody (C-Term) - Product Information

Application	IF, WB, FC,E
Primary Accession	<u>095259</u>
Reactivity	Human
Predicted	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	111423

## KCNH1 Antibody (C-Term) - 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, EAG, EAG1

#### Target/Specificity

This KCNH1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 787-820 amino acids from the human region of human KCNH1.

**Dilution** IF~~1:25 WB~~1:2000 FC~~1:25 E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### 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**

KCNH1 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

## KCNH1 Antibody (C-Term) - Protein Information

Name KCNH1 (<u>HGNC:6250</u>)



**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:<u>10880439</u>, PubMed:<u>11943152</u>, PubMed:<u>22732247</u>, PubMed:<u>25420144</u>, PubMed:<u>25556795</u>, PubMed:<u>25915598</u>, PubMed:<u>27005320</u>, PubMed:<u>27325704</u>, PubMed:<u>27618660</u>, PubMed:<u>30149017</u>, PubMed:<u>9738473</u>). The activation kinetics depend on the prepulse potential and external divalent cation concentration (PubMed:<u>11943152</u>). With negative prepulses, the current activation is delayed and slowed down several fold, whereas more positive prepulses speed up activation (PubMed:<u>11943152</u>). The time course of activation is biphasic with a fast and a slowly activating current component (PubMed:<u>11943152</u>). Activates at more positive membrane potentials and exhibit a steeper activation curve (PubMed:<u>11943152</u>). Channel properties are modulated by subunit assembly (PubMed:<u>11943152</u>). Mediates IK(NI) current in myoblasts (PubMed:<u>9738473</u>). Involved in the regulation of cell proliferation and differentiation, in particular adipogenic and osteogenic differentiation in bone marrow-derived mesenchymal stem cells (MSCs) (PubMed:<u>23881642</u>).

## **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

## KCNH1 Antibody (C-Term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

KCNH1 Antibody (C-Term) - Images





Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized Hela cells labeling KCNH1 with AP22343b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-Rabbit IgG secondary antibody at 1/200 dilution (green). Immunofluorescence image showing Nucleus and Cytoplasm staining on Hela cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin(red). The nuclear counter stain is DAPI (blue).



All lanes : Anti-KCNH1 Antibody (C-Term) at 1:2000 dilution Lane 1: COLO 205 whole cell lysate Lane 2: Human brain lysate Lane 3: Hela whole cell lysate Lane 4: MCF-7 whole cell lysate Lane 5: SH-SY5Y whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 111 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Overlay histogram showing Hela cells stained with AP22343b(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22343b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit lgG, **DyLight**® 488 Conjugated Highly Cross-Adsorbed(OE188374) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit  $IgG1 (1\mu g/1x10^6 \text{ cells})$  used under the same conditions. Acquisition of >10, 000 events was performed.

## KCNH1 Antibody (C-Term) - Background

Pore-forming (alpha) subunit of voltage-gated non- inactivating delayed rectifier potassium channel. Channel properties may be modulated by cAMP and subunit assembly. Mediates IK(NI) current in myoblasts.

# KCNH1 Antibody (C-Term) - References

Occhiodoro T., et al.FEBS Lett. 434:177-182(1998). Pardo L.A., et al.EMBO J. 18:5540-5547(1999). Gregory S.G., et al.Nature 441:315-321(2006). Mural R.J., et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases. Schoenherr R., et al.EMBO J. 19:3263-3271(2000).