Potassium channel subfamily K member 9 Antibody

Mouse Monoclonal Antibody [Clone KCNK9/3500]

Catalog No	Format	Size
51305-MSM1-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
51305-MSM1-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
51305-MSM1-P1ABX	Purified Ab WITHOUT BSA or Azide at 1.0mg/ml	100 ug

Applications	Tested Dillution	Note
Immunohistochemistry (IHC)	1-2ug/ml	30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes

Product Details

Clone	KCNK9/3500
Immunogen	Recombinant human KCNK9 protein
Host	Mouse
Clonality	Monoclonal
Isotype / Light Chain	IgG2 / Kappa
Mol. Weight of Antigen	42.26kDa
Cellular Localization	Cell membrane, Cell projection, Dendrite, Mitochondrion inner membrane
Species Reactivity	Human
Positive Control	Mainly found in the cerebellum

**Optimal dilution for a specific application should be determined.*

Product Images for Potassium channel subfamily K member 9 Antibody

Specificity & Comments

K(+) channel that conducts voltage-dependent outward rectifying currents upon membrane depolarization. Voltage sensing is coupled to K(+) electrochemical gradient in an 'ion flux gating' mode where outward but not inward ion flow opens the gate (PubMed:11042359, PubMed:11431495, PubMed:26919430, PubMed:38630723). Changes ion selectivity and becomes permeable to Na(+) ions in response to extracellular acidification. Protonation of the pH sensor His-98 stabilizes C-type inactivation conformation likely converting the channel from outward K(+)-conducting, to inward Na(+)-conducting to nonconductive state (PubMed:22948150, PubMed:38630723). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (By similarity) (PubMed:23169818, PubMed:38630723). Allows K(+) currents with fast-gating kinetics important for the repolarization and hyperpolarization phases of action potentials (By similarity). In granule neurons, hyperpolarizes the resting membrane potential to limit intrinsic neuronal excitability, but once the action potential threshold is reached, supports high-frequency action potential firing and increased neuronal excitability. Homomeric and/or heteromeric KCNK3:KCNK9 channels operate in cerebellar granule cells, whereas heteromeric KCNK1:KCNK9 enables currents in hippocampal dentate gyrus granule neurons (By similarity). Dispensable for central chemosensory respiration i.e. breathing controlled by brainstem CO2/pH, it rather conducts pH-sensitive currents and controls the firing rate of serotonergic raphe neurons involved in potentiation of the respiratory chemoreflex (By similarity). In retinal ganglion cells, mediates outward currents that regulate action potentials in response to acidification of the synaptic cleft. Involved in transmission of image-forming and nonimage-forming visual information in the retina (By similarity). In adrenal gland, contributes to the maintenance of a hyperpolarized resting membrane potential of aldosterone-producing cells at zona glomerulosa and limits aldosterone release as part of a regulatory mechanism that controls arterial blood pressure and electrolyte homeostasis (By similarity).

Supplied As

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

Storage and Stability

Antibody with azide - store at 2 to 8 °C. Antibody without azide - store at -20 to -80 °C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.

Limitations and Warranty