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CALHM1 Polyclonal Antibody

Catalog # AP63538

Product Information

Application	WB, IHC-P
Primary Accession	Q8IU99
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38264

Additional Information

Gene ID	255022
Other Names	Calcium homeostasis modulator protein 1; Protein FAM26C
Dilution	WB~~WB: 1:500-1000 IHC: 1:200-500 IHC-P~~N/A
Format	PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol.
Storage Conditions	-20℃

Protein Information

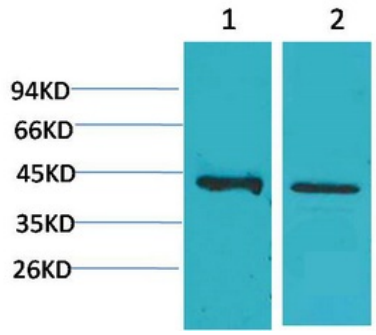
Name	CALHM1 {ECO:0000303|PubMed:18585350, ECO:0000312|HGNC:HGNC:23494}
Function	Pore-forming subunit of gustatory voltage-gated ion channels required for sensory perception of sweet, bitter and umami tastes (By similarity). With CALHM3 forms a fast-activating voltage-gated ATP- release channel in type II taste bud cells, ATP acting as a neurotransmitter to activate afferent neural gustatory pathways (By similarity) (PubMed:23467090). Acts both as a voltage-gated and calcium-activated ion channel: mediates neuronal excitability in response to membrane depolarization and low extracellular Ca(2+) concentration (PubMed:22711817, PubMed:23300080). Has poor ion selectivity and forms a wide pore (around 14 Angstroms) that mediates permeation of small ions including Ca(2+), Na(+), K(+) and Cl(-), as well as larger ions such as ATP(4-) (PubMed:22711817, PubMed:23300080, PubMed:32832629, PubMed:37380652). Mediates Ca(2+) influx and downstream activation of the ERK1 and ERK2 cascade in neurons (PubMed:23345406). Triggers endoplasmic reticulum stress by reducing the Ca(2+) content of the endoplasmic reticulum (PubMed:21574960). May indirectly control amyloid precursor protein (APP) proteolysis and aggregated amyloid-beta (Abeta) peptides levels in a Ca(2+)-dependent manner (PubMed:18585350).

Cellular Location	Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:D3Z291}. Note=Colocalizes with HSPA5 at the endoplasmic reticulum (PubMed:18585350). Localizes to the basolateral membrane of epithelial cells including taste cells (By similarity) {ECO:0000250|UniProtKB:D3Z291, ECO:0000269|PubMed:18585350}
Tissue Location	Predominantly expressed in adult brain. Detected also in retinoic acid-differentiated SH-SY5Y cells. Specifically expressed in circumvallate taste bud cells

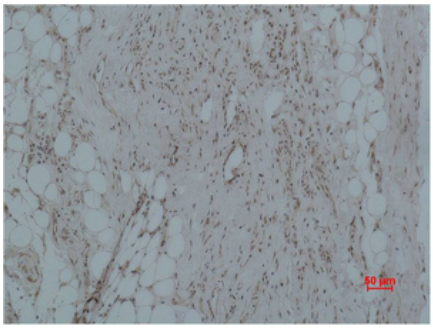
Background

Pore-forming subunit of a voltage-gated ion channel required for sensory perception of sweet, bitter and umami tastes. Specifically present in type II taste bud cells, where it plays a central role in sweet, bitter and umami taste perception by inducing ATP release from the cell, ATP acting as a neurotransmitter to activate afferent neural gustatory pathways. Acts both as a voltage-gated and calcium-activated ion channel: mediates neuronal excitability in response to changes in extracellular Ca(2+) concentration. Has poor ion selectivity and forms a wide pore (around 14 Angstroms) that mediates permeation of Ca(2+), Na(+) and K(+), as well as permeation of monovalent anions. Acts as an activator of the ERK1 and ERK2 cascade. Triggers endoplasmic reticulum stress by reducing the calcium content of the endoplasmic reticulum. May indirectly control amyloid precursor protein (APP) proteolysis and aggregated amyloid-beta (Abeta) peptides levels in a Ca(2+) dependent manner.

Images



Western blot analysis of 1) Human Brain Tissue, 2) Rat Brain Tissue using CALHM1 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded Human Hepatocarcinoma using CALHM1 Polyclonal Antibody.