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# CALHM1 Antibody
**Catalog # ASC11061**

## Specification

### CALHM1 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC, IF** |
| Primary Accession | Q8IU99 |
| Other Accession | NP_001001412, 194440685 |
| Reactivity | **Human, Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **IgG** |
| Application Notes | **CALHM1 antibody can be used for detection of CALHM1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.** |

### CALHM1 Antibody - Additional Information

| | |
|---|---|
| Gene ID | **255022** |

**Target/Specificity**
CALHM1;

**Reconstitution & Storage**
CALHM1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**
CALHM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### CALHM1 Antibody - Protein Information

**Name** CALHM1 (HGNC:23494)

**Synonyms** FAM26C

**Function**
Pore-forming subunit of a voltage-gated ion channel required for sensory perception of sweet, bitter and umami tastes (By similarity). 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 (By similarity). Together with CALHM3, forms a fast-activating voltage-gated ATP-release channel in type II taste bud cells (TBCs) (By similarity). Acts both as a voltage-gated and calcium-activated ion channel: mediates neuronal excitability in response to changes in extracellular Ca(2+) concentration (PubMed:<a href="http://www.uniprot.org/citations/22711817" target="_blank">22711817</a>, PubMed:<a href="http://www.uniprot.org/citations/23300080" target="_blank">23300080</a>).

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 (PubMed:<a href="http://www.uniprot.org/citations/22711817" target="_blank">22711817</a>). Acts as an activator of the ERK1 and ERK2 cascade (PubMed:<a href="http://www.uniprot.org/citations/23345406" target="_blank">23345406</a>). Triggers endoplasmic reticulum stress by reducing the calcium content of the endoplasmic reticulum (PubMed:<a href="http://www.uniprot.org/citations/21574960" target="_blank">21574960</a>). May indirectly control amyloid precursor protein (APP) proteolysis and aggregated amyloid-beta (Abeta) peptides levels in a Ca(2+) dependent manner (PubMed:<a href="http://www.uniprot.org/citations/18585350" target="_blank">18585350</a>).

**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}

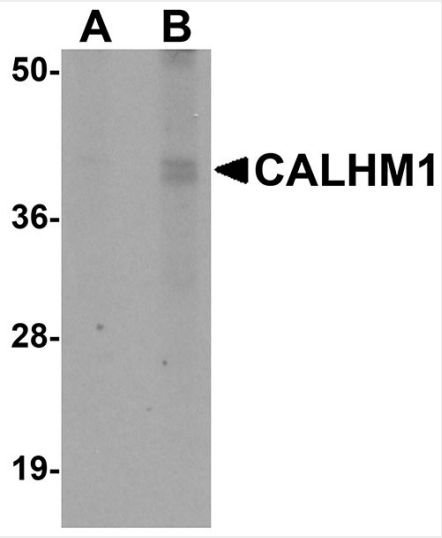
**Tissue Location**
Predominantly expressed in adult brain. Detected also in retinoic acid-differentiated SH-SY5Y cells. Specifically expressed in circumvallate taste bud cells

## CALHM1 Antibody - Protocols

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

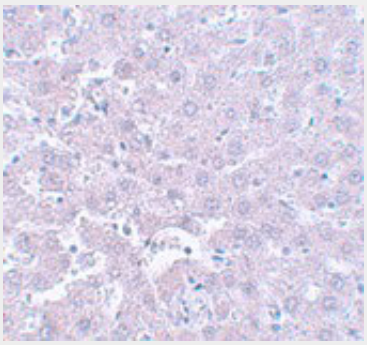
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## CALHM1 Antibody - Images

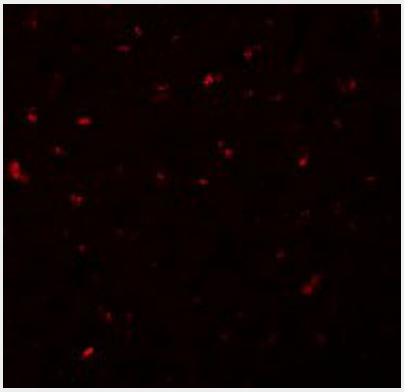


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Western blot analysis of CALHM1 in rat liver tissue lysate with CALHM1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of CALHM1 in rat liver tissue with CALHM1 antibody at 5 µg/mL.



Immunofluorescence of CALHM1 in Rat Liver cells with CALHM1 antibody at 20 µg/mL.

**CALHM1 Antibody - Background**

CALHM1 Antibody: Alzheimer's disease (AD) is a progressive neurodegenerative disorder characterized by a massive loss of neurons in several brain regions and by the presence of senile plaques comprised of aggregated amyloid-beta (Abeta) peptides produced by the endoproteolysis of the amyloid precursor protein (APP). The calcium homeostasis modulator 1 (CALHM1) is a recently identified multipass transmembrane glycoprotein that controls cytosolic Ca2+ concentration and Abeta levels. While some studies suggest CALHM1 is significantly associated with risk of AD, other reports suggest there is no link. CALHM1 has been suggested to modulate the Ca2+-dependent proteolytic process of APP through controlling the level of cytosolic Ca2+.

**CALHM1 Antibody - References**

Mattson MP. Pathways towards and away from Alzheimer’s disease. Nature2004; 430:631-9.
Dreses-Werringloer U, Lambert JC, Vingtdeux V, et al. A polymorphism in CALHM1 influences Ca2+ homeostasis, Ab levels, and Alzheimer ’s disease risk. Cell2008; 133:1149-61.
Nacmias B, Tedde A, Bagnoli S, et al. Lack of implication for CALHM1 P86L common variation in Italian patients with early and late onset Alzheimer ’s disease. J. Alzheimers Dis.2010; epub.