

MONOCLONAL ANTIBODY

For research use only, Not for diagnostic use.

Catalog No. FKW-M01

Anti CALHM1 (Clone : 8F1)

BACKGROUND

The calcium homeostasis regulator (CALHM) gene family encodes pore-forming subunits with four transmembrane domains that form large-pore voltage-gated channels. CALHM1, a member of this family, was identified during research into genes associated with late-onset Alzheimer's disease, and polymorphisms in the human CALHM1 gene have been reported to correlate with an increased risk of Alzheimer's disease. Beyond its role in Alzheimer's pathogenesis, a subset of taste receptor cells, specifically Type II taste bud cells, express CALHM1 and CALHM3, which together form a voltage-gated channel. This channel plays an essential role in releasing ATP as a neurotransmitter at the synapses with afferent nerve fibers.

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| Product type | Primary antibody |
| Immunogen | Cys-PRKEVATYFSKV (Mouse CALHM1, Pro337-Val348) |
| Raised in | Rat |
| Clone number | 8F1 |
| Isotype | IgG2a,k |
| Source | Culture supernatant |
| Purification | Affinity purified by Protein G |
| Buffer | Phosphate buffered saline containing 0.1 % NaN ₃ as a preservative. |
| Concentration | 1 mg/mL |
| Volume | 100 uL |
| Label | Unlabeled |
| Specificity | Mouse CALHM1 |
| Reactivity | human, mouse, porcine. Other species are not tested. |
| Storage | Store at -20 °C. |

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| Application notes | • Western blotting :1/1,000 (1 ug/mL). |
| Recommended dilutions | • Immunohistochemistry :1/1,000 (1 ug/mL). |

Optimal dilutions/concentrations should be determined by the end user.

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| References | <ul style="list-style-type: none"> • Ikuta R, Kakinohana Y, Hamada S.(2024) Ultrastructural localization of calcium homeostasis modulator 1 in mouse taste buds. Chemical Senses 49, bjae019. PMID: 38761122. • Soma S, Hayatsu N, Nomura K, Sherwood MW, Murakami T, Sugiyama Y, Suematsu N, Aoki T, Yamada Y, Asayama M, Kaneko M, Ohbayashi K, Arizono M, Ohtsuka M, Hamada S, Matsumoto I, Iwasaki Y, Ohno N, Okazaki Y, Taruno, A. (2025) Channel synapse mediates neurotransmission of airway protective chemoreflexes. Cell 188 (10) p2687-2704.e29 PMID: 40187347. |
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ANTIBODY CHARACTERIZATION

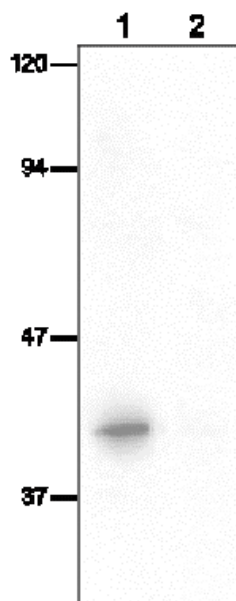


Fig.1 Immunoblot analysis using anti-CALHM1 antibody (8F1)

Lane 1: NIH3T3 cells transfected with CALHM1 cDNA inserted in pcDNA3.1 vector, whole cell lysate. Lane 2: NIH3T3 cells transfected with pcDNA3.1 vector only, whole cell lysate.

Predicted band size: 38 kDa.

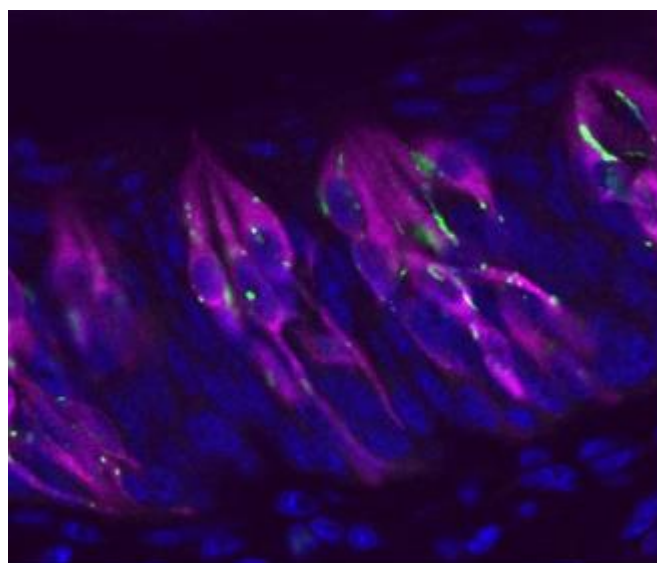


Fig.2 IHC staining with anti-CALHM1 antibody (8F1)

Immunohistochemical analysis of adult mouse taste bud tissue labeling CALHM1 (green) with 8F1 and phospholipase C b2 (magenta), a marker of type II taste bud cells. Blue: Nuclei stained with DAPI. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (10 mmol/L, pH 7) for 20 min at 85 °C.

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