

Stromal Interaction Molecule 1 Rabbit mAb

Catalog # AP76130

Product Information

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|--------------------------|------------------------|
| Application | WB, IHC-P |
| Primary Accession | Q13586 |
| Reactivity | Rat, Human, Mouse |
| Host | Rabbit |
| Clonality | Monoclonal Antibody |
| Isotype | IgG |
| Conjugate | Unconjugated |
| Purification | Affinity Purified |
| Calculated MW | 77423 |

Additional Information

| | |
|--------------------|---|
| Gene ID | 6786 |
| Other Names | STIM1 |
| Dilution | WB~~1/500-1/1000 IHC-P~~N/A |
| Format | Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| Storage | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

Protein Information

| | |
|-----------------|---|
| Name | STIM1 |
| Synonyms | GOK {ECO:0000303 PubMed:9377559} |
| Function | Acts as a Ca(2+) sensor that gates two major inward rectifying Ca(2+) channels at the plasma membrane: Ca(2+) release- activated Ca(2+) (CRAC) channels and arachidonate-regulated Ca(2+)- selective (ARC) channels (PubMed: 15866891 , PubMed: 16005298 , PubMed: 16208375 , PubMed: 16537481 , PubMed: 16733527 , PubMed: 16766533 , PubMed: 16807233 , PubMed: 18854159 , PubMed: 19182790 , PubMed: 19249086 , PubMed: 19622606 , PubMed: 19706554 , PubMed: 22464749 , PubMed: 24069340 , PubMed: 24351972 , PubMed: 24591628 , PubMed: 25326555 , PubMed: 26322679 , PubMed: 28219928 , PubMed: 32415068). Plays a role in mediating store-operated Ca(2+) entry (SOCE), a Ca(2+) influx following depletion of intracellular Ca(2+) stores. Upon Ca(2+) depletion, translocates from the endoplasmic reticulum to the plasma membrane where it activates CRAC |

channel pore-forming subunits ORA1, ORA2 and ORA3 to generate sustained and oscillatory Ca²⁺ entry (PubMed:[16208375](#), PubMed:[16537481](#), PubMed:[32415068](#)). Involved in enamel formation (PubMed:[24621671](#)).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Cytoplasm, cytoskeleton. Sarcoplasmic reticulum. Note=Translocates from the endoplasmic reticulum to the cell membrane in response to a depletion of intracellular calcium and is detected at punctae corresponding to junctions between the endoplasmic reticulum and the cell membrane (PubMed:[16005298](#), PubMed:[16208375](#), PubMed:[18854159](#), PubMed:[19182790](#), PubMed:[19249086](#)). Associated with the microtubule network at the growing distal tip of microtubules (PubMed:[19632184](#)). Colocalizes with ORAI1 at the cell membrane (PubMed:[27185316](#)). Colocalizes preferentially with CASQ1 at endoplasmic reticulum in response to a depletion of intracellular calcium (PubMed:[27185316](#))

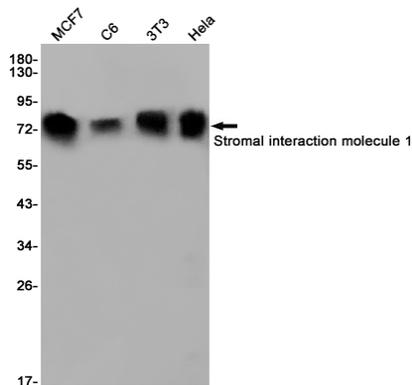
Tissue Location

Ubiquitously expressed in various human primary cells and tumor cell lines.

Background

STIM1 is a potential tumor suppressor; defects in STIM1 may cause rhabdomyosarcoma and rhabdoid tumors. STIM1 can either homodimerize or form heterodimers with STIM2. STIM2 possesses a high sequence identity to STIM1 and can function as an inhibitor of STIM1-mediated plasma membrane store-operated Ca²⁺ entry. However, further investigation is required to elucidate the true physiological function of STIM2.

Images



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