abcam

Product datasheet

Anti-Stromal interaction molecule 1 antibody [EPR3414] ab108994

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Stromal interaction molecule 1 antibody [EPR3414]
Description	Rabbit monoclonal [EPR3414] to Stromal interaction molecule 1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	SH SY5Y, K562, HepG2, HeLa and LnCaP cell lysates; Human breast tissue.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR3414
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab108994 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

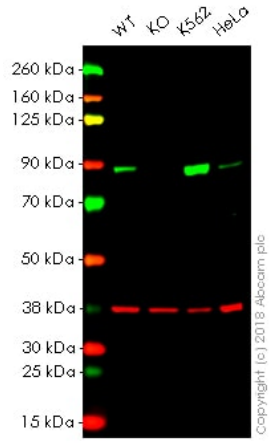
Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 77 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Antigen retrieval with citrate buffer (pH 6): Heat up to 98°C, below boiling, and then let cool for 10-20 min.

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

Function	Plays a role in mediating Ca(2+) influx following depletion of intracellular Ca(2+) stores. Acts as Ca(2+) sensor in the endoplasmic reticulum via its EF-hand domain. Upon Ca(2+) depletion, translocates from the endoplasmic reticulum to the plasma membrane where it activates the Ca(2+) release-activated Ca(2+) (CRAC) channel subunit, TMEM142A/ORAI1.
Tissue specificity	Ubiquitously expressed in various human primary cells and tumor cell lines.
Involvement in disease	Defects in STIM1 are the cause of immune dysfunction with T-cell inactivation due to calcium entry defect type 2 (IDTICED2) [MIM:612783]. IDTICED2 is an immune disorder characterized by recurrent infections, impaired T-cell activation and proliferative response, decreased T-cell production of cytokines, lymphadenopathy, and normal lymphocytes counts and serum immunoglobulin levels. Additional features include thrombocytopenia, autoimmune hemolytic anemia, non-progressive myopathy, partial iris hypoplasia, hepatosplenomegaly and defective enamel dentition.
Sequence similarities	Contains 1 EF-hand domain. Contains 1 SAM (sterile alpha motif) domain.
Domain	The microtubule tip localization signal (MtLS) motif; mediates interaction with MAPRE1 and targeting to the growing microtubule plus ends.
Post-translational modifications	Glycosylation is required for cell surface expression. Phosphorylated predominantly on Ser residues.
Cellular localization	Cell membrane. Endoplasmic reticulum membrane. Cytoplasm > cytoskeleton. Translocates from the endoplasmic reticulum to the cell membrane in response to a depletion of intracellular calcium. Associated with the microtubule network at the growing distal tip of microtubules.

Images



Western blot - Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994)

All lanes : Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994) at 1/1000 dilution

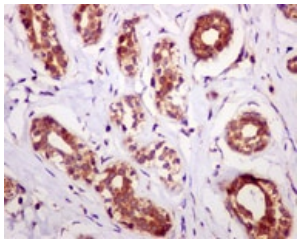
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : STIM1 (Stromal interaction molecule 1) knockout HAP1 whole cell lysate
Lane 3 : K562 whole cell lysate
Lane 4 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 77 kDa
Observed band size: 77 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab108994 observed at 77 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

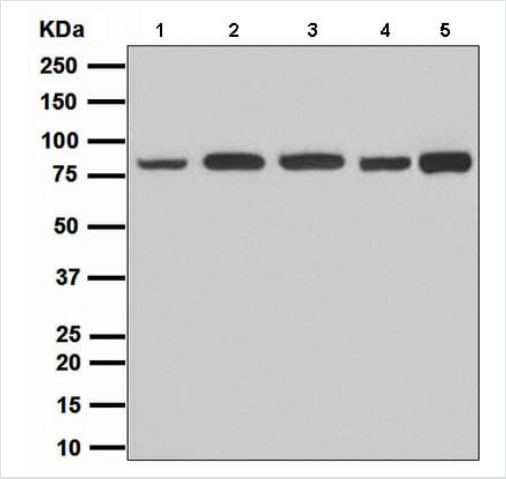
ab108994 was shown to specifically react with Stromal interaction molecule 1 in wild-type HAP1 cells as signal was lost in STIM1 (Stromal interaction molecule 1) knockout cells. Wild-type and STIM1 (Stromal interaction molecule 1) knockout samples were subjected to SDS-PAGE. Ab108994 and **ab9484** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994)

ab108994 at 1/50 dilution, staining Stromal interaction molecule 1 in Human breast by Immunohistochemistry, Paraffin-embedded tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994)

All lanes : Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994) at 1/1000 dilution

Lane 1 : SH SY5Y cell lysate
Lane 2 : K562 cell lysate
Lane 3 : HepG2 cell lysate
Lane 4 : HeLa cell lysate
Lane 5 : LnCaP cell lysate

Lysates/proteins at 10 µg per lane.

Performed under reducing conditions.

Predicted band size: 77 kDa

Anti-Stromal interaction molecule 1 antibody [EPR3414] (ab108994)

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