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TRPM7 Antibody
Rabbit mAb
Catalog # AP91591

Specification

TRPM7 Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q96QT4
Reactivity	**Rat**
Clonality	**Monoclonal**
Other Names	
ALSPDC; CHAK; CHAK1; LTrpC7; TRPM7;	
Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**212697 Da**

TRPM7 Antibody - Additional Information

Dilution	**WB~~1:1000** **FC~~1:10~50** **ICC~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human TRPM7**
Description	**Essential ion channel and serine/threonine-protein kinase. Divalent cation channel permeable to calcium and magnesium. Has a central role in magnesium ion homeostasis and in the regulation of anoxic neuronal cell death.**
Storage Condition and Buffer	**Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

TRPM7 Antibody - Protein Information

Name TRPM7

Synonyms CHAK1, LTRPC7 {ECO:0000303|PubMed:113855

Function
Bifunctional protein that combines an ion channel with an intrinsic kinase domain, enabling it to modulate cellular functions either by conducting ions through the pore or by phosphorylating downstream proteins via its kinase domain. The channel is highly permeable to divalent cations, specifically calcium (Ca2+), magnesium (Mg2+) and zinc (Zn2+) and mediates their influx (PubMed:11385574,

PubMed:12887921, PubMed:15485879, PubMed:24316671, PubMed:35561741, PubMed:36027648). Controls a wide range of biological processes such as Ca2(+), Mg(2+) and Zn(2+) homeostasis, vesicular Zn(2+) release channel and intracellular Ca(2+) signaling, embryonic development, immune responses, cell motility, proliferation and differentiation (By similarity). The C-terminal alpha-kinase domain autophosphorylates cytoplasmic residues of TRPM7 (PubMed:18365021). In vivo, TRPM7 phosphorylates SMAD2, suggesting that TRPM7 kinase may play a role in activating SMAD signaling pathways. In vitro, TRPM7 kinase phosphorylates ANXA1 (annexin A1), myosin II isoforms and a variety of proteins with diverse cellular functions (PubMed:15485879, PubMed:18394644).

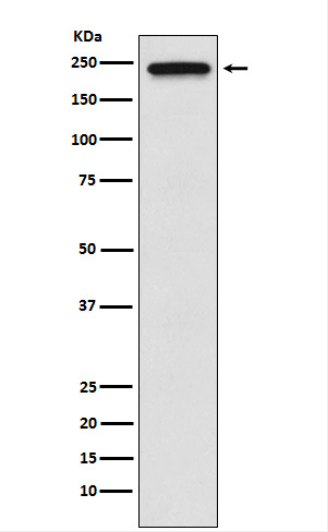
Cellular Location
Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q923J1}. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:Q923J1}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q923J1}. Note=Localized largely in intracellular Zn(2+)-storage vesicles. {ECO:0000250|UniProtKB:Q923J1}

TRPM7 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

TRPM7 Antibody - Images



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Western blot analysis of TRPM7 expression in HeLa cell lysate.