

TRPM7 (15L9) Rabbit Monoclonal Antibody

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Catalog # AP93699

Product Information

Application	WB
Primary Accession	Q96QT4
Reactivity	Human
Clonality	Monoclonal
Calculated MW	212697

Additional Information

Gene ID	54822
Other Names	Transient receptor potential cation channel subfamily M member 7, 2.7.11.1, Channel-kinase 1, Long transient receptor potential channel 7, LTrpC-7, LTrpC7, TRPM7 kinase, cleaved form, TRPM7, CHAK1, LTRPC7 {ECO:0000303 PubMed:11385574}
Dilution	WB~~1:1000
Storage Conditions	-20°C

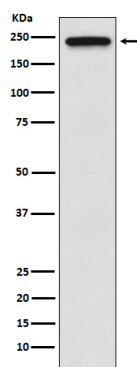
Protein Information

Name	TRPM7
Synonyms	CHAK1, LTRPC7 {ECO:0000303 PubMed:113855}
Function	<p>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⁺(+), Mg²⁺(+) and Zn²⁺(+) homeostasis, vesicular Zn²⁺(+) release channel and intracellular Ca²⁺(+) 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).</p>

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}

Images



Western blot analysis of TRPM7 expression in HeLa cell lysate.

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