

KD-Validated Anti-TRPM7 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1712**Specification****KD-Validated Anti-TRPM7 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	Q96QT4
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 213 kDa , observed , 260 kDa kDa
Gene Name	TRPM7
Aliases	TRPM7; Transient Receptor Potential Cation Channel Subfamily M Member 7; LTRPC7; CHAK1; TRP-PLIK; Long Transient Receptor Potential Channel 7; Channel-Kinase 1; EC 2.7.11.1; LTrpC-7; Transient Receptor Potential Cation Channel, Subfamily M, Member 7; Transient Receptor Potential-Phospholipase C-Interacting Kinase; LTRPC Ion Channel Family Member 7; ALSPDC; LTrpC7; CHAK
Immunogen	A synthesized peptide derived from human TRPM7

KD-Validated Anti-TRPM7 Rabbit Monoclonal Antibody - 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}

KD-Validated Anti-TRPM7 Rabbit Monoclonal 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⁺(+), 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).

Cellular Location

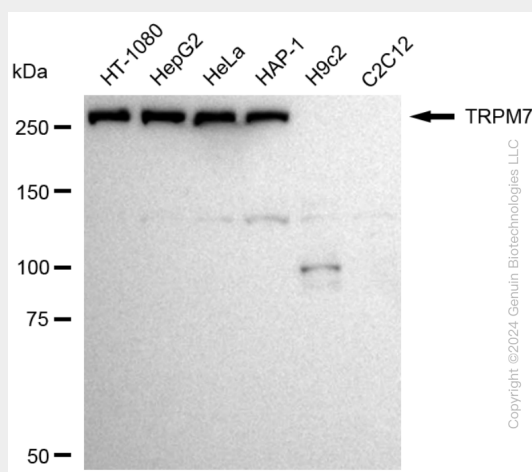
Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q923J1}. Cytoplasmic
vesicle membrane {ECO:0000250|UniProtKB:Q923J1}; Multi-pass membrane protein
{ECO:0000250|UniProtKB:Q923J1}. Note=Localized largely in intracellular Zn²⁺-storage
vesicles. {ECO:0000250|UniProtKB:Q923J1}

KD-Validated Anti-TRPM7 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

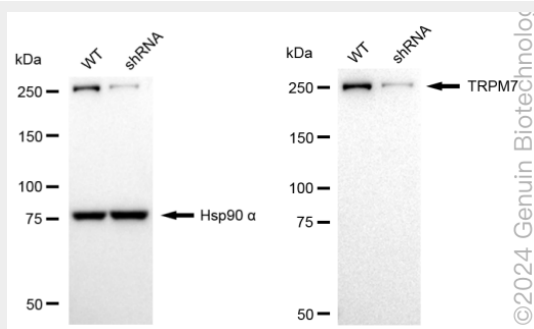
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-TRPM7 Rabbit Monoclonal Antibody - Images

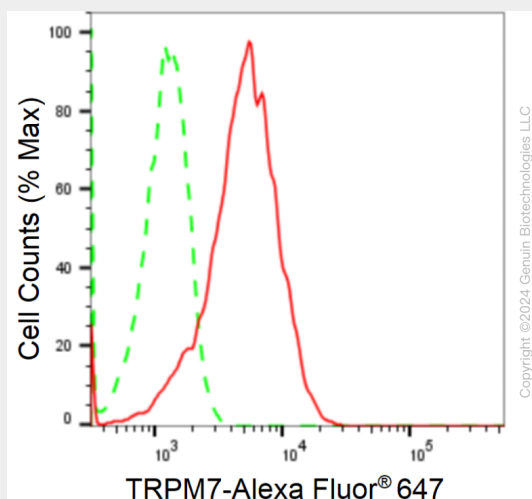


Western blotting analysis using anti-TRPM7 antibody (Cat#AGI1712). Total cell lysates (30 µg)
from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with

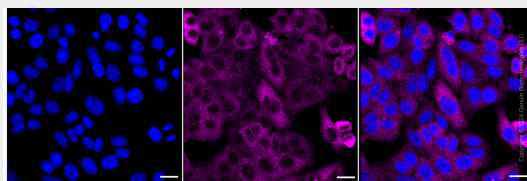
anti-TRPM7 antibody (Cat#AGI1712, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-TRPM7 antibody (Cat#AGI1712). TRPM7 expression in wild type (WT) and TRPM7 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-TRPM7 antibody (Cat#AGI1712, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of TRPM7 expression in HepG2 cells using anti-TRPM7 antibody (Cat#AGI1712, 1:2,000). Green, isotype control; red, TRPM7.



Immunocytochemical staining of HepG2 cells with anti-TRPM7 antibody (Cat#AGI1712, 1:1,000). Nuclei were stained blue with DAPI;TRPM7 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.