Mouse TrpM7 Monoclonal Antibody | anti-Trpm7 antibody

TrpM7 Antibody: Biotin

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA103374	**Mouse**	**Human, Mouse, Rat**	**Immunofluorescence, Immunocytochemistry, Immunoprecipitation, Western Blot**

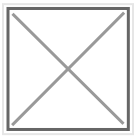
PRODUCT SYNONYMS

TrpM7; Monoclonal Antibody; TrpM7 Antibody: Biotin; CHAK; CHAK1; LTRPC7; TRP PLIK; Channel kinase 1; anti-Trpm7 antibody

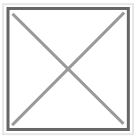
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG1
Clone Number	S74-25
Form/Format	Protein G Purified
Concentration	1mg/mL (varies by lot)
Sequence Length	1862
Applicable Applications for anti-Trpm7 antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), IP (Immunoprecipitation), WB (Western Blot)
Conjugate	Biotin
Storage Buffer	PBS pH7.4, 50% glycerol, 0.09% sodium azide
Preparation and Storage	-20 degree C

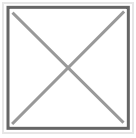
IMAGES



WB (Western Blot)
Western Blot analysis of Human Cell lysates showing detection of TrpM7 protein using Mouse Anti-TrpM7 Monoclonal Antibody, Clone S74-25. Load: 15 ug. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-TrpM7 Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



IHC (Immunohiostchemistry)
Immunohistochemistry analysis using Mouse Anti-TrpM7 Monoclonal Antibody, Clone S74-25. Tissue: hippocampus. Species: Human. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-TrpM7 Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



IHC (Immunohistochemistry)
Immunohistochemistry analysis using Mouse Anti-TrpM7 Monoclonal Antibody, Clone S74-25. Tissue: Brain Slice. Species: Mouse. Fixation: 10% Formalin Solution for 12-24 hours at RT. Primary Antibody: Mouse Anti-TrpM7 Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: HRP/DAB Detection System: Biotinylated Goat Anti-Mouse, Streptavidin Peroxidase, DAB Chromogen (brown) for 30 minutes at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 250-500 ul for 5 minutes at RT. Localization: Nuclear staining of both neurons and glia.

ADDITIONAL INFORMATION

Related Product Information for anti-Trpm7 antibody	**Background Info:** Detects ~220kDa. No cross-reactivity against TrpM6 **Scientific Background:** Ion channels are integral membrane proteins that help establish and control the small voltage gradient across the plasma membrane of living cells by allowing the flow of ions down their electrochemical gradient (1). They are present in the membranes that surround all biological cells because their main function is to regulate the flow of ions across this membrane. Whereas some ion channels permit the passage of ions based on charge, others conduct based on a ionic species, such as sodium or potassium. Furthermore, in some ion channels, the passage is governed by a gate which is controlled by chemical or electrical signals, temperature, or mechanical forces. There are a few main classifications of gated ion channels. There are voltage- gated ion channels, ligand-gated, other gating systems and finally those that are classified differently, having more exotic characteristics. The first are voltage- gated ion channels which open and close in response to membrane potential. These are then separated into sodium, calcium, potassium, proton, transient receptor, and cyclic nucleotide-gated channels; each of which is responsible for a unique role. Ligand-gated ion channels are also known as ionotropic receptors, and they open in response to specific ligand molecules binding to the extracellular domain of the receptor protein. The other gated classifications include activation and inactivation by second messengers, inward-rectifier potassium channels, calcium-activated potassium channels, two-pore-domain potassium channels, light-gated channels, mechano-sensitive ion channels and cyclic nucleotide-gated channels. Finally, the other classifications are based on less normal characteristics such as two-pore channels, and transient receptor potential channels (2). TRPs, mammalian homologs of the Drosophila transient receptor potential (trp) protein, are ion channels that are thought to mediate capacitative calcium entry into the cell. TRP-PLIK is a protein that is both an ion channel and a kinase. As a channel, it conducts calcium and monovalent cations to depolarize cells and increase intracellular calcium. As a kinase, it is capable of phosphorylating itself and other substrates. The kinase activity is necessary for channel function, as shown by its dependence on intracellular ATP and by the kinase mutants (3, 4).
Product Categories/Family for anti-Trpm7 antibody	Ion Channels; Neuroscience
References	1. Hille B. (2001) Ion Channels of Excitable Membranes, 3rd Ed., Sinauer Associated Inc.: Sunderland, MA USA. 2. www.iochannels.org 3. Brauchi S., Krapivinsky G., Krapivinsky L., Clapham D.E. (2008) Proc Natl Acad Sci USA. 105(24): 8304-8308. 4. Numata T, Okada Y. (2008) J Biol Chem. 283(22): 15097-15103.

NCBI AND UNIPROT INFORMATION

NCBI GI #	256773287
NCBI GeneID	58800
NCBI Accession #	NP_001157797.1
NCBI GenBank Nucleotide #	NM_001164325.1
UniProt Accession #	Q923J1; Q8C7S7; Q8CE54; Q921Y5; Q925B2; Q9CUT2; Q9JLQ1; A2AI58
Molecular Weight	212,399 Da
NCBI Official Full Name	transient receptor potential cation channel subfamily M member 7 isoform 2
NCBI Official Synonym Full Names	transient receptor potential cation channel, subfamily M, member 7
NCBI Official Symbol	Trpm7

NCBI Official Synonym Symbols	CHAK; CHAK1; Ltpr7; Ltrpc7; LTrpC-7; TRPPLIK; 2310022G15Rik; 4833414K03Rik; 5033407O22Rik
NCBI Protein Information	transient receptor potential cation channel subfamily M member 7; channel-kinase 1; transient receptor potential M7; long transient receptor potential channel 7; transient receptor potential-related protein, ChaK; transient receptor potential-phospholipase C-interacting kinase
UniProt Protein Name	Transient receptor potential cation channel subfamily M member 7
UniProt Gene Name	**Trpm7**
UniProt Synonym Gene Names	Chak; Ltrpc7; LTrpC-7; LTrpC7; TRP-PLIK
UniProt Entry Name	TRPM7_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://stage.aaabiotech.com/monoclonal/trpm7-antibody-clone-s74-25-immunofluorescence-immunocytochemistry-immunoprecipitation-western-blot-elisa/103374