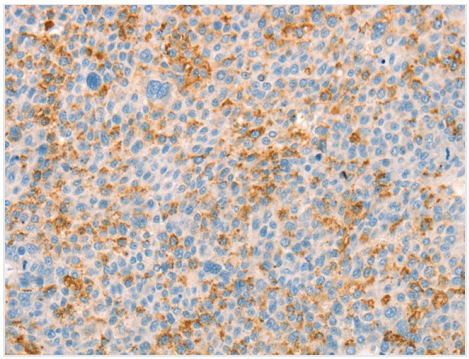
# TRPM7 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | TRPM7, Polyclonal Antibody |
| **Full Product Name** | TRPM7 Polyclonal Antibody |
| **Product Gene Name** | anti-TRPM7 antibody |
| **Product Synonym Names** | CHAK; CHAK1; ALSPDC; LTRPC7; TRP-PLIK |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human, Mouse, Rat |
| **Purity/Purification** | Antigen affinity purification |
| **Concentration** | 0.8mg/mL (lot specific) |
| **Preparation and Storage** | Store at -20 degree C (regular) and -80 degree C (long term). Avoid freeze / thaw cycles. |
| **Molecular Weight** | 212,697 Da |
| **OMIM** | 105500 |
| **Immunogen** | Synthetic peptide of human TRPM7 |
| **Buffer** | PBS with 0.05% sodium azide, 50% glycerol, pH7.3 |
| **Product Categories/Family for anti-TRPM7 antibody** | Epigenetics |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for anti-TRPM7 antibody** | ELISA (EIA), Immunohistochemistry (IHC) |
| **Application Notes for anti-TRPM7 antibody** | IHC: 1:25-1:100 |
| **Related Product Information for anti-TRPM7 antibody** | The protein encoded by this gene is both an ion channel and a serine/threonine protein kinase. The kinase activity is essential for the ion channel function, which serves to increase intracellular calcium levels and to help regulate magnesium ion homeostasis. Defects in this gene are a cause of amyotrophic lateral sclerosis-parkinsonism/dementia complex of Guam. |
| **Other Notes** | Small volumes of anti-TRPM7 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for TRPM7 purchase** | MBS2522028 is an antibody targeting TRPM7. Also known as TRPM7 Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit. |



**Immunohistochemistry (IHC) of anti-TRPM7 antibody**
Immunohistochemistry of paraffin-embedded Human liver cancer tissue using TRPM7 Polyclonal Antibody at dilution 1:25

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TRPM7. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 148612863 |
| **NCBI GeneID** | 54822 |
| **NCBI Accession #** | NP_060142.3 |
| **UniProt Secondary Accession #** | Q6ZMF5; Q86VJ4; Q8NBW2; Q9BXB2; Q9NXQ2 |
| **UniProt Related Accession #** | Q96QT4 |
| **GenBank Nucleotide #** | NM_017672.5 |
| **NCBI Official Full Name** | transient receptor potential cation channel subfamily M member 7 isoform a |
| **NCBI Official Synonym Full Names** | transient receptor potential cation channel, subfamily M, member 7 |
| **NCBI Official Symbol** | TRPM7 |
| **NCBI Official Synonym Symbols** | CHAK; CHAK1; ALSPDC; LTRPC7; LTrpC-7; TRP-PLIK |
| **UniProt Protein Name** | Transient receptor potential cation channel subfamily M member 7 |
| **UniProt Synonym Protein Names** | Channel-kinase 1; Long transient receptor potential channel 7; LTrpC-7; LTrpC7 |
| **Protein Family** | Transient receptor potential cation channel subfamily |
| **UniProt Gene Name** | TRPM7 |
| **UniProt Synonym Gene Names** | CHAK1; LTRPC7; LTrpC-7; LTrpC7 |
| **UniProt Entry Name** | TRPM7_HUMAN |
| **NCBI Protein Information** | transient receptor potential cation channel subfamily M member 7; LTRPC ion channel family member 7; channel-kinase 1; long transient receptor potential channel 7; transient receptor potential-phospholipase C-interacting kinase |
| **NCBI Summary for TRPM7** | The protein encoded by this gene is both an ion channel and a serine/threonine protein kinase. The kinase activity is essential for the ion channel function, which serves to increase intracellular calcium levels and to help regulate magnesium ion homeostasis. Defects in this gene are a cause of amyotrophic lateral sclerosis-parkinsonism/dementia complex of Guam. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Jul 2014] |

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| **UniProt Comments for TRPM7** | ChaK1: is an unusual and ubiquitous bifunctional protein containing a transient receptor potential (TRP) ion channel fused to a protein kinase of the Atypical alpha group. Required for early embryonic development and for maintaining cardiac automaticity. The channel conducts Zn(2+), Mg(2+), and Ca(2+) as well as monovalent cations. The kinase can be cleaved from the channel domain. The cleaved kinase translocates to the nucleus where it binds chromatin-remodeling complexes including Polycomb, and phosphorylates specific histone residues. The kinase activity is essential for the channel function, and channel function is critical to maintain physiological intracellular magnesium levels. Plays a key role in oxidative stress-induced cell death. TRP voltage-independent calcium-permeable cation channels are divided into six subfamilies, two of which (TRPC and TRPM) have members that are widely expressed and activated by oxidative stress. Is activated by reactive oxygen/nitrogen species, resulting in cation conductance and anoxic neuronal cell death. This phenotype is rescued by suppression of ChaK1 expression. Related to ChaK2, another Atypical alpha kinase fused to a TRP ion channel protein.<br><br>Protein type: Kinase, protein; Protein kinase, atypical; EC 2.7.11.1; Channel, cation; Membrane protein, multi-pass; Membrane protein, integral; ATYPICAL group; Alpha family; ChaK subfamily<br><br>Chromosomal Location of Human Ortholog: 15q21<br><br>Cellular Component: ruffle; plasma membrane; integral to membrane<br><br>Molecular Function: protein serine/threonine kinase activity; myosin binding; calcium channel activity; metal ion binding; actin binding; ATP binding<br><br>Biological Process: protein amino acid autophosphorylation; actomyosin structure organization and biogenesis; calcium-dependent cell-matrix adhesion; transmembrane transport<br><br>Disease: Amyotrophic Lateral Sclerosis-parkinsonism/dementia Complex 1 |
| **Research Articles on TRPM7** | **1.** Data indicate heteromer formation between channel kinases TRPM6 and TRPM7 influences the biological activity of the ion channels. |
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