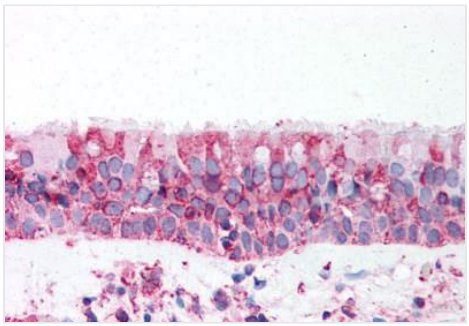
TRPV4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	TRPV4, Polyclonal Antibody
Full Product Name	Rabbit Polyclonal to Human TRPV4
Product Gene Name	anti-TRPV4 antibody
Product Synonym Names	Anti-TRPV4 Antibody (N-Terminus) IHC-plus; TRPV4; CMT2C; HMSN2C; OTRPC4; SSQTL1; VR-OAC; VRL-2; Osm-9-like TRP channel 4; SPSMA; TRP12; VRL2; VROAC; SMAL; Human TRPV4
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human **Predicted Reactivity:** Monkey (at least 90% immunogen sequence identity)
Form/Format	PBS, 0.1% sodium azide.
Purity/Purification	Immunoaffinity Purified
Concentration	0.91 mg/ml (lot specific)
Specificity	Human TRPV4. BLAST analysis of the peptide immunogen showed no homology with other human proteins.
Preparation and Storage	Long term: -70 degree C; Short term: +4 degree C
Molecular Weight	85,884 Da
OMIM	phenotype 613508
3D Structure	ModBase 3D Structure for Q9HBA0
Target Species	Human
Immunogen Description	Synthetic 18 amino acid peptide from N-terminus of human TRPV4. Percent identity with other species by BLAST analysis: Human (100%); Marmoset (94%); Panda, Dog (89%); Hamster, Bovine, Pig (83%).
Immunogen Type	Synthetic peptide
Immunogen	TRPV4 antibody was raised against synthetic 18 amino acid peptide from N-terminus of human TRPV4. Percent identity with other species by BLAST analysis: Human (100%); Marmoset (94%); Panda, Dog (89%); Hamster, Bovine, Pig (83%).
Antigen Modification	N-Terminus
Product Categories/Family for anti-TRPV4 antibody	Family: Ion Channel; Subfamily: Calcium channel - TRP
Applications Tested/Suitable for anti-TRPV4 antibody	Immunohistochemistry (IHC - Paraffin)
Application Notes for anti-TRPV4 antibody	IHC-P (2.5 - 5 ug/ml)
Related Product Information for anti-TRPV4 antibody	A member of the Vanilloid family of ion channels Trpv4 (VRL-2) is responsive to changes in extracellular osmolarity in the physiologically relevant range and is expressed in tissues exposed to changing osmotic environments.
Other Notes	Small volumes of anti-TRPV4 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 TRPV4 purchase	MBS244063 is an antibody targeting TRPV4. Also known as Rabbit Polyclonal to Human TRPV4. Reactive in Human **Predicted Reactivity:** Monkey (at least 90% immunogen sequence identity). Host: Rabbit.



Immunohistochemistry (IHC) of anti-TRPV4 antibody
Anti-TRPV4 antibody IHC of human trachea. Immunohistochemistry of formalin-fixed, paraffin-embedded tissue after heat-induced antigen retrieval.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TRPV4. It may not necessarily be applicable to this product.

NCBI GI #	22547184
NCBI GeneID	59341
NCBI Accession #	NP_067638.3
UniProt Primary Accession #	Q9HBA0
UniProt Secondary Accession #	Q17R79; Q2Y122; Q2Y123; Q2Y124; Q86YZ6; Q8NDY7; Q8NG64; Q96Q92; Q96RS7; Q9HBC0; B7ZKQ6
UniProt Related Accession #	Q9HBA0
GenBank Nucleotide #	NM_021625.4
NCBI Official Full Name	transient receptor potential cation channel subfamily V member 4 isoform a
NCBI Official Synonym Full Names	transient receptor potential cation channel, subfamily V, member 4
NCBI Official Symbol	TRPV4
NCBI Official Synonym Symbols	SMAL; VRL2; CMT2C; SPSMA; TRP12; VROAC; HMSN2C; OTRPC4; SSQTL1
UniProt Protein Name	Transient receptor potential cation channel subfamily V member 4
UniProt Synonym Protein Names	Osm-9-like TRP channel 4; OTRPC4; Transient receptor potential protein 12; TRP12; Vanilloid receptor-like channel 2; Vanilloid receptor-like protein 2; VRL-2; Vanilloid receptor-related osmotically-activated channel; VR-OAC
Protein Family	Transient receptor potential cation channel subfamily
UniProt Gene Name	TRPV4
UniProt Synonym Gene Names	VRL2; VROAC; TrpV4; OTRPC4; TRP12; VRL-2; VR-OAC
UniProt Entry Name	TRPV4_HUMAN
NCBI Protein Information	transient receptor potential cation channel subfamily V member 4; osm-9-like TRP channel 4; vanilloid receptor-like channel 2; transient receptor potential protein 12; OSM9-like transient receptor potential channel 4; osmosensitive transient receptor potential channel 4; vanilloid receptor-related osmotically activated channel
NCBI Summary for TRPV4	This gene encodes a member of the OSM9-like transient receptor potential channel (OTRPC) subfamily in the transient receptor potential (TRP) superfamily of ion channels. The encoded protein is a Ca2+-permeable, nonselective cation channel that is thought to be involved in the regulation of systemic osmotic pressure. Mutations in this gene are the cause of spondylometaphyseal and metatropic dysplasia and hereditary motor and sensory neuropathy type IIC. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2010]

UniProt Comments for TRPV4	TRPV4: a non-selective calcium permeant cation channel probably involved in osmotic sensitivity and mechanosensitivity. Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification. Also activated by low pH, citrate and phorbol esters. Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin-dependent mechanism with a negative feedback mechanism. Promotes cell-cell junction formation in skin keratinocytes and plays an important role in the formation and/or maintenance of functional intercellular barriers. Acts as a regulator of intracellular Ca(2+) in synoviocytes. Plays an obligatory role as a molecular component in the nonselective cation channel activation induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and also regulates production of IL-8. Belongs to the transient receptor (TC 1.A.4) family. TrpV subfamily. TRPV4 sub-subfamily. 6 isoforms of the human protein are produced by alternative splicing. Protein type: Channel, cation; Membrane protein, multi-pass; Membrane protein, integral Chromosomal Location of Human Ortholog: 12q24.1 Cellular Component: cortical actin cytoskeleton; growth cone; focal adhesion; adherens junction; cell surface; lamellipodium; cytoplasmic microtubule; integral to membrane; plasma membrane; cytoplasmic vesicle; filopodium; cilium Molecular Function: calmodulin binding; actin filament binding; protein binding; protein kinase C binding; microtubule binding; calcium channel activity; osmosensor activity; beta-tubulin binding; cation channel activity; SH2 domain binding; actin binding; protein kinase binding; ATP binding; alpha-tubulin binding Biological Process: intercellular junction assembly; actin filament organization; regulation of response to osmotic stress; cellular calcium ion homeostasis; osmosensory signaling pathway; vasopressin secretion; positive regulation of microtubule depolymerization; elevation of cytosolic calcium ion concentration; hyperosmotic salinity response; response to mechanical stimulus; calcium ion transport; actin cytoskeleton reorganization; cell volume homeostasis; cortical microtubule organization and biogenesis; transmembrane transport; microtubule polymerization Disease: Brachyolmia Type 3; Scapuloperoneal Spinal Muscular Atrophy; Hereditary Motor And Sensory Neuropathy, Type Iic; Spondyloepiphyseal Dysplasia, Maroteaux Type; Sodium Serum Level Quantitative Trait Locus 1; Parastremmatic Dwarfism; Spinal Muscular Atrophy, Distal, Congenital Nonprogressive; Digital Arthropathy-brachydactyly, Familial; Spondylometaphyseal Dysplasia, Kozlowski Type; Metatropic Dysplasia
Research Articles on TRPV4	**1.** results identify Cat-S as a biased agonist of PAR2 that causes PAR2- and TRPV4-dependent inflammation and pain.
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