

TRPV4 Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18990a

Specification

TRPV4 Antibody (N-term) - Product Information

Application	WB, E
Primary Accession	Q9HBA0
Other Accession	Q9ERZ8 , Q9EPK8 , NP_067638.3 , AOA1D5PXA5
Reactivity	Human
Predicted	Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	98281
Antigen Region	160-189

TRPV4 Antibody (N-term) - Additional Information

Gene ID 59341

Other Names

Transient receptor potential cation channel subfamily V member 4, TrpV4, 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, TRPV4, VRL2, VROAC

Target/Specificity

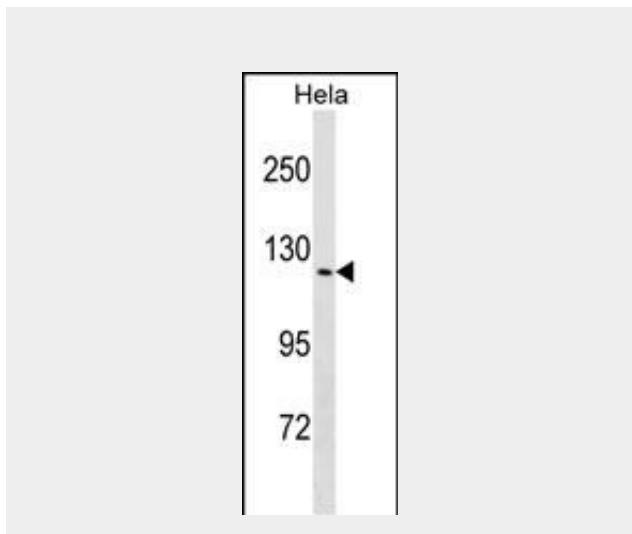
This TRPV4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 160-189 amino acids from the N-terminal region of human TRPV4.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.



TRPV4 Antibody (N-term) (Cat. #AP18990a) western blot analysis in HeLa cell line lysates (35ug/lane). This demonstrates the TRPV4 antibody detected the TRPV4 protein (arrow).

TRPV4 Antibody (N-term) - Background

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.

TRPV4 Antibody (N-term) - References

Shukla, A.K., et al. J. Biol. Chem. 285(39):30115-30125(2010)
 Cantero-Recasens, G., et al. J. Biol. Chem.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

TRPV4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

285(36):27532-27535(2010)

Loukin, S., et al. J. Biol. Chem.

285(35):27176-27181(2010)

Nishimura, G., et al. Am. J. Med. Genet. A 152A (6), 1443-1449 (2010) :

Zimon, M., et al. Brain 133 (PT 6), 1798-1809 (2010) :

TRPV4 Antibody (N-term) - Protein Information

Name TRPV4

Synonyms VRL2, VROAC

Function

Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity. Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification (PubMed:18826956, PubMed:18695040, PubMed:29899501). Also activated by heat, low pH, citrate and phorbol esters (PubMed:16293632, PubMed:18826956, PubMed:18695040, PubMed:25256292, PubMed:20037586, PubMed:21964574). Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin- dependent mechanism with a negative feedback mechanism (PubMed:<a href="http://www.uniprot.org/citations/1272

4311" target="_blank">>12724311,
PubMed:<a href="http://www.uniprot.org/ci
tations/18826956"
target="_blank">18826956).
Promotes cell-cell junction formation in skin
keratinocytes and plays an important role in
the formation and/or maintenance of
functional intercellular barriers (By
similarity). Acts as a regulator of
intracellular Ca(2+) in synoviocytes
(PubMed:<a href="http://www.uniprot.org/c
itations/19759329"
target="_blank">19759329). 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 (PubMed:<a hr
ef="http://www.uniprot.org/citations/19759
329" target="_blank">19759329).
Together with PKD2, forms mechano- and
thermosensitive channels in cilium
(PubMed:<a href="http://www.uniprot.org/c
itations/18695040"
target="_blank">18695040).
Negatively regulates expression of
PPARGC1A, UCP1, oxidative metabolism
and respiration in adipocytes (By similarity).
Regulates expression of chemokines and
cytokines related to proinflammatory
pathway in adipocytes (By similarity).
Together with AQP5, controls regulatory
volume decrease in salivary epithelial cells
(By similarity). Required for normal
development and maintenance of bone and
cartilage (PubMed:<a href="http://www.uni
prot.org/citations/26249260"
target="_blank">26249260). In its
inactive state, may sequester DDX3X at the
plasma membrane. When activated, the
interaction between both proteins is
affected and DDX3X relocates to the
nucleus (PubMed:<a href="http://www.unip
rot.org/citations/29899501"
target="_blank">29899501).

Cellular Location

Cell membrane. Apical cell membrane;
Multi-pass membrane protein. Cell junction,
adherens junction
{ECO:0000250|UniProtKB:Q9EPK8}. Cell
projection, cilium. Note=Assembly of the
putative homotetramer occurs primarily in
the endoplasmic reticulum [Isoform 5]: Cell
membrane [Isoform 4]: Endoplasmic
reticulum

Tissue Location

Found in the synoviocytes from patients with (RA) and without (CTR) rheumatoid arthritis (at protein level)

TRPV4 Antibody (N-term) - 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](#)

TRPV4 Antibody (N-term) - Citations

- [Pharmacological inhibition of TRPV4 channels protects against ischemia-reperfusion-induced renal insufficiency in neonatal pigs.](#)