10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TRPV1 Antibody
Catalog # ASC11597

Specification

TRPV1 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q8NER1
Other Accession	NP_542437, 74315354
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 92 kDa KDa**
Application Notes	**TRPV1 antibody can be used for detection of TRPV1 by Western blot at 1 - 2 µg/mL.**

TRPV1 Antibody - Additional Information

Gene ID **7442**

Target/Specificity
TRPV1;

Reconstitution & Storage
TRPV1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
TRPV1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TRPV1 Antibody - Protein Information

Name TRPV1

Synonyms VR1

Function
Non-selective calcium permeant cation channel involved in detection of noxious chemical and thermal stimuli (PubMed:11050376, PubMed:11243859, PubMed:11226139, PubMed:12077606). Seems to mediate proton influx and may be involved in intracellular acidosis in nociceptive neurons. Involved in mediation of inflammatory pain and hyperalgesia. Sensitized by a phosphatidylinositol second messenger system activated by receptor tyrosine kinases, which involves PKC isozymes and PCL. Activated by vanilloids, like capsaicin, and temperatures higher than 42 degrees Celsius (PubMed:37117175). Upon activation, exhibits a time- and Ca(2+)-dependent outward rectification, followed by a long-lasting refractory state. Mild extracellular acidic pH (6.5) potentiates channel activation by noxious heat

and vanilloids, whereas acidic conditions (pH <6) directly activate the channel. Can be activated by endogenous compounds, including 12-hydroperoxytetraenoic acid and bradykinin. Acts as ionotropic endocannabinoid receptor with central neuromodulatory effects. Triggers a form of long-term depression (TRPV1-LTD) mediated by the endocannabinoid anandamine in the hippocampus and nucleus accumbens by affecting AMPA receptors endocytosis.

Cellular Location
Postsynaptic cell membrane {ECO:0000250|UniProtKB:O35433}; Multi-pass membrane protein. Cell projection, dendritic spine membrane {ECO:0000250|UniProtKB:O35433}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Note=Mostly, but not exclusively expressed in postsynaptic dendritic spines {ECO:0000250|UniProtKB:O35433}

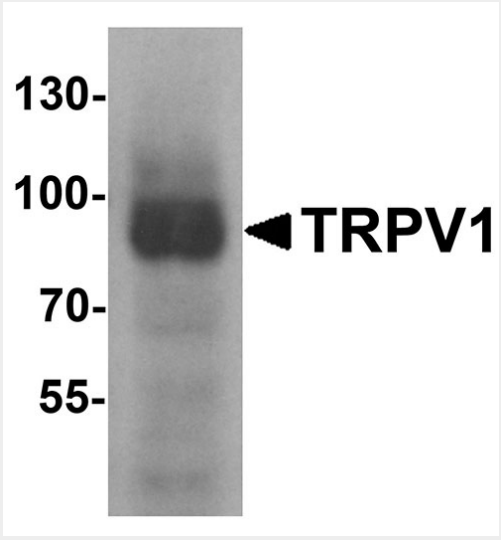
Tissue Location
Widely expressed at low levels. Expression is elevated in dorsal root ganglia. In skin, expressed in cutaneous sensory nerve fibers, mast cells, epidermal keratinocytes, dermal blood vessels, the inner root sheet and the infundibulum of hair follicles, differentiated sebocytes, sweat gland ducts, and the secretory portion of eccrine sweat glands (at protein level)

TRPV1 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 Cytomety
- Cell Culture

TRPV1 Antibody - Images



Western blot analysis of TRPV1 in K562 cell lysate with TRPV1 antibody at 1 µg/mL.

TRPV1 Antibody - Background

TRPV1 Antibody: TRPV1 is a receptor for capsaicin, the main pungent ingredient in hot chili

peppers, and elicits a sensation of burning pain by selectively activating sensory neurons. TRPV1 is a non-selective cation channel that is structurally related to members of the TRP family of ion channels such as TRPC3 and TRPC6. This receptor is also activated by increases in temperature in the noxious range, suggesting that it functions as a transducer of painful thermal stimuli in vivo.

TRPV1 Antibody - References

Eid SR and Cortright DN. Transient receptor potential channels on sensory nerves. Handb. Exp. Pharmacol. 2009; 194:261-81.
Minke B and Cook B. TRP channel proteins and signal transduction. Physiol. Rev. 2002; 82:429-72.
Planells-Cases R, Valente P, Ferrer-Montiel A, et al. Complex regulation of TRPV1 and related thermo-TRPs: implications for therapeutic intervention. Adv. Exp. Med. Biol. 2011; 704:491-515.