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TRPV1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP13988a

Specification

TRPV1 Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q8NER1

TRPV1 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 7442

Other Names
Transient receptor potential cation channel subfamily V member 1, TrpV1, Capsaicin receptor, Osm-9-like TRP channel 1, OTRPC1, Vanilloid receptor 1, TRPV1, VR1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13988a was selected from the N-term region of TRPV1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TRPV1 Antibody (N-term) Blocking peptide - Protein Information

Name TRPV1

Synonyms VR1

Function
Ligand-activated non-selective calcium permeant cation channel involved in detection of noxious chemical and thermal stimuli. 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. Activation by vanilloids, like capsaicin, and temperatures higher than 42 degrees Celsius, 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 {ECO:0000250|UniProtKB:O35433}. Cell projection, dendritic spine membrane {ECO:0000250|UniProtKB:O35433}; Multi-pass membrane protein {ECO:0000250|UniProtKB:O35433}. Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:O35433}. 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 (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

TRPV1 Antibody (N-term) Blocking peptide - Images

TRPV1 Antibody (N-term) Blocking peptide - Background

Capsaicin, the main pungent ingredient in hot chilipeppers, elicits a sensation of burning pain by selectivelyactivating sensory neurons that convey information about noxiousstimuli to the central nervous system. The protein encoded by thisgene is a receptor for capsaicin and is a non-selective cationchannel that is structurally related to members of the TRP familyof ion channels. This receptor is also activated by increases intemperature in the noxious range, suggesting that it functions as atransducer of painful thermal stimuli in vivo. Four transcriptvariants encoding the same protein, but with different 5' UTRsequence, have been described for this gene.

TRPV1 Antibody (N-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Cantero-Recasens, G., et al. J. Biol. Chem. 285(36):27532-27535(2010)Shieh, K.R., et al. Neurogastroenterol. Motil. 22(9):971-977(2010)Cheng, L.E., et al. Neuron 67(3):373-380(2010)Westlund, K.N., et al. Mol Pain 6, 46 (2010) :