Product datasheet

Anti-TRPV4 antibody ab94868

Overview

Product name  Anti-TRPV4 antibody
Description  Rabbit polyclonal to TRPV4
Host species  Rabbit
Tested applications  Suitable for: IHC-P, WB
Species reactivity  Reacts with: Human, Pig
Predicted to work with: Mouse, Rat, Rabbit, Chicken, Guinea pig, Cow, Cat, Dog
Immunogen  Synthetic peptide corresponding to a region within internal amino acids 720-769 (VDEVNWSHWNQNLGIINEDPGKNETYQYYGFSHTVGR LRRDRWSSVPRV) of Human TRPV4 isoform 2 (NP_671737)
Positive control  HT1080 cell lysate

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer  Preservative: 0.09% Sodium azide
Constituents: 2% Sucrose, PBS
Purity  Immunogen affinity purified
Clonality  Polyclonal
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab94868 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
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.

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

Involvement in disease
Brachyolmia 3
Spondyloepiphyseal dysplasia Kozłowski type
Metatropic dysplasia
Distal spinal muscular atrophy, congenital non-progressive
Charcot-Marie-Tooth disease 2C
Scapuloperoneal spinal muscular atrophy
Spondyloepiphyseal dysplasia Maroteaux type
Parastremmatic dwarfism
Digital arthropathy-brachydactyly, familial

Sequence similarities
Belongs to the transient receptor (TC 1.A.4) family. TrpV subfamily. TRPV4 sub-subfamily. Contains 3 ANK repeats.

Post-translational modifications
Phosphorylation results in enhancement of its channel function.

Cellular localization
Cell membrane and Cell membrane. Cell junction > adherens junction. Assembly of the putative homotetramer occurs primarily in the endoplasmic reticulum.

IHC-P
1/500.

WB
Use a concentration of 1 µg/ml. Predicted molecular weight: 91 kDa. Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.
Western blot analysis of PANC1 cells labeling TRPV4 with ab94868 at 1.0µg/ml.

ab94868 staining TRPV4 in cultured hippocampal slices of rat brain by Immunohistochemistry - PFA fixed sections.

Slice cultures attached to the PTFE membrane were fixed with 4% paraformaldehyde in PBS for 20 minutes at room temperature. They were permeabilized with 1% Triton X-100 in PBS overnight at 4 °C, then blocked with 3% bovine serum albumin (BSA) in PBS and incubated overnight at 4 °C with ab94868 (Red) at a 1/500 dilution. Following washes with PBS and blocking with 3% BSA, tissue was incubated for 1 hour at room temperature with Alexa Fluor 568-conjugated goat anti-rabbit antibody diluted 1/500 in blocking solution. Tissue was washed in PBS, mounted with DAPI.

Blue: DAPI.
Green: anti-Map2.
Red: ab94868.
Western blot - Anti-TRPV4 antibody (ab94868)

Anti-TRPV4 antibody (ab94868) at 1 µg/ml + HT1080 cell lysate at 10 µg

Secondary
HRP conjugated anti-Rabbit IgG at 1/50000 dilution

Predicted band size: 91 kDa

Gel concentration: 6-18%

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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