

Anti-TRPC5

produced in rabbit, affinity isolated antibody

Catalog Number **T0325**

Product Description

Anti-TRPC5 (Transient receptor potential cation channel, subfamily C, member 5) is produced in rabbit using as immunogen a highly purified peptide, (C)HKWGDGQEEQVTTRL, corresponding to amino acid residues 959-973 of human TRPC5 with an additional N-terminal cysteine. The epitope is identical in rat, mouse, and rabbit. The antibody was affinity isolated on immobilized immunogen.

Anti-TRPC5 specifically recognizes the TRPC5 protein in rat brain membranes by immunoblotting.

TRP channels are a large family (~20 genes) of plasma membrane, non-selective cationic channels that are widely expressed in both excitable and non-excitable cells. These proteins are divided into three main subfamilies on the basis of sequence homology; TRPC, TRPV and TRPM.¹ The TRPC subfamily channels are all activated by products of the Receptor-Gq-PLC signal transduction pathway.²

A *Drosophila* gene, *trp* (transient receptor potential), was the founding member of the TRP superfamily. Cytosolic Ca²⁺ serves as an intracellular mediator for many extracellular signals. At rest, cells maintain a low Ca²⁺ concentration of ~ 10⁻⁷ M. Upon activation of the phospholipase C-dependent mechanism, the cytosolic Ca²⁺ concentration rises. In many vertebrate and invertebrate cells, the influx of Ca²⁺ is biphasic. Mobilization of Ca²⁺ from internal stores (sarcoplasmic reticulum in muscle cells and endoplasmic reticulum in other cell types) drives the initial burst. The second phase, referred to as capacitative Ca²⁺ entry (CCE) or store-operated Ca²⁺ entry, occurs when the depletion of intracellular Ca²⁺ stores activates a non-voltage-sensitive plasma membrane Ca²⁺ + conductance.³ The TRP channels involved for this conductance thus have sometimes been referred to as SOCs for store-operated channels, although this phenomenon is still poorly understood.²

In recent years, seven mammalian TRPC channels, channels, named TRPC1-TRPC7, have been cloned. All TRPCs have six transmembrane segments with a pore-forming loop between the fifth and sixth segment, but they differ in their channel conductance.^{4,5}

Reagent

Supplied lyophilized from phosphate buffered saline, pH 7.4, with 1% BSA, and 0.05 % sodium azide as preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water, depending on the package size purchased. Antibody dilutions should be made in buffer containing 1-3 % bovine serum albumin.

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. The reconstituted solution can be stored at 2-8 °C for up to 2 weeks. For longer storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Centrifuge all antibody preparations before use (10000 x g 5 min). Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: the recommended working dilution is 1:200 using rat brain membrane.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Montell, C., et al., Cell, **108**, 595-598 (2002).
2. Clapham, D.E., Nature, **426**, 517-524 (2003).
3. Wes, P.D. et al., Proc. Natl. Acad. Sci. USA, **92**, 9652-9656 (1995).
4. Harteneck, C., et al., Trends Neurosci., **23**, 159-166 (2000).
5. Hofmann, T., et al., Proc. Natl. Acad. Sci. USA, **99**, 7461-7466 (2002).

AH,PHC 12/07-1