

Product Information

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103 USA

Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757

email: techservice@sial.com sigma-aldrich.com

Anti-TRPC1

produced in rabbit, affinity isolated antibody

Catalog Number **T8276**

Product Description

Anti-TRPC1 (Transient receptor potential cation channel, subfamily C, member 1) is produced in rabbit using as immunogen a highly purified peptide QLYDKGYTSKEQKDC corresponding to amino acid residues 557-571 of human TRPC1.¹⁻⁴ The antibody was affinity isolated on immobilized antigen.

Anti-TRPC1 recognizes the TRPC1 protein in rat brain or testis by immunoblotting. The antibody can also be used for immunohistochemistry.

Cytosolic Ca^{2+} serves as an intracellular mediator for many extracellular signals. At rest, cells maintain a low Ca^{2+} concentration of $\sim 10^{-7}$ M. Upon activation of the phospholipase C-dependent mechanism, the cytosolic Ca^{2+} concentration rises. In many vertebrate and invertebrate cells, the influx of Ca^{2+} is biphasic. Mobilization of Ca^{2+} from internal stores (mainly the endoplasmic reticulum) drives the initial burst. The second phase, referred to as capacitative Ca^{2+} entry (CCE) or store-operated Ca^{2+} entry, occurs when the depletion of intracellular Ca^{2+} pools activates a non-voltage-sensitive plasma membrane Ca^{2+} conductance.³

A *Drosophila* gene, *trp* (transient receptor potential), encodes the first identified candidate for such a channel. Seven mammalian TRP channels, named TRPC1-TRPC7, have been cloned.⁵ These channel proteins should provide useful tools for studying calcium-depletion induced Ca^{2+} influxes.

Reagents

Supplied lyophilized from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 0.05% sodium azide.

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

Prior to reconstitution, store at -20°C . After reconstitution, the stock antibody solution may be stored at $2-8^{\circ}\text{C}$ for up to 2 weeks. For extended 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. 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. Genbank accession number P48995.
2. Zhu, X. et al., *FEBS Lett.*, **373**, 193 (1995).
3. Wes, P.D. et al., *Proc. Natl. Acad. Sci. USA*, **92**, 9652 (1995).
4. Zitt, C. et al., *Neuron*, **16**, 1189 (1996).
5. Zhu, X. and Birnbaumer, L., *News Physiol. Sci.*, **13**, 211 (1998).

AH,PHC 12/07-1

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications.

Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply.

Please see reverse side of the invoice or packing slip.

SIGMA-ALDRICH™