

Product Information

Anti-RACK1 (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **R2030**

Product Description

Anti-RACK1 (C-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 268-282 of human RACK1 (GeneID: 10399), conjugated to KLH via an N-terminal added cystein residue. The corresponding sequence is conserved in human, rat, and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-RACK1 (C-terminal) specifically recognizes human RACK1. Applications include immunoblotting (~30 kDa) and immunoprecipitation. Staining of the RACK1 band in immunoblotting is specifically inhibited by the immunizing peptide.

Protein kinase C comprises a family of cytosolic enzymes that translocate to different intracellular sites upon activation. Receptors for activated C-kinase (RACKs) are scaffold proteins for PKC; they anchor activated PKC at the site of translocation. RACK1 is the selective RACK for PKC β II.¹ It is composed of seven WD repeats, thus resembling the structure of the β subunit of G proteins. It is not a substrate of PKC, but in its presence, the activity of PKC is increased by several fold.¹ In addition to anchoring activated PKC, RACK1 anchors other signaling enzymes such as Src tyrosine kinase^{2,3}, integrin⁴ and phosphodiesterase 4D5.⁵ The ability of RACK1 to interact simultaneously with different signaling molecules, allows it to integrate inputs from distinct signaling pathways. In mammals, it regulates several processes that involve contact with extracellular matrix such as spreading, the establishment of focal adhesions and cell-cell contacts. Accumulating evidence attributes to it the role of regulating several major nervous system pathways.⁶ In addition, RACK1 is a ribosomal protein.^{7,8} It is a component of the small subunit of the ribosome, and from its position can make direct contact with ribosomal RNA. It recruits activated PKC to the ribosome, which in turn, phosphorylates initiation factor 6, leading to ribosome assembly.⁹

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/ml.

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.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 μ g/ml is recommended using HEK-293T cell lysates.

Immunoprecipitation: a working amount of 5-10 μ g is recommended using HEK-293T cell lysates.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Ron, D., et al., *Proc. Natl. Acad. Sci. USA*, **91**, 839-843 (1994).
2. Chang, B.Y., et al., *Mol. Cell. Biol.*, **18**, 3245-3256 (1998).
3. Chang, B.Y., et al., *J. Biol. Chem.*, **276**, 20346-20356 (2001).
4. Liliental, J., and Chang, D.D., *J. Biol. Chem.*, **273**, 2379-2383 (1998).

5. Yarwood, S.J., et al., *J. Biol. Chem.*, **274**, 14909-14917 (1999).
6. Sklan, E.H., et al., *Prog. Neurobiol.*, **78**, 117-134 (2006).
7. Link, A.J., et al., *Nature Biotechnol.*, **17**, 676-682, (1999).
8. Gerbasi, V.R., et al., *Mol. Cell. Biol.*, **24**, 8276-8287 (2004).
9. Ceci, M., et al., *Nature*, **426**, 579-584 (2003).

YK,KAA,PHC 10/07-1

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.