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## Product Information

### Anti-RACK1 (N-terminal)

produced in rabbit, IgG fraction of antiserum

Catalog Number **R1905**

#### Product Description

Anti-RACK1 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 2-16 of human RACK1 (GeneID: 10399), conjugated to KLH via a C-terminal added cysteine residue. The corresponding sequence is conserved in human, rat, and mouse. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-RACK1 (N-terminal) specifically recognizes human RACK1. Applications include immunoblotting (~30 kDa), immunoprecipitation, and immunofluorescence. 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 protein for PKC; they anchor activated PKC at the site of translocation. RACK1 is the selective RACK for PKC $\beta$ II. It is composed of seven WD repeats, thus resembling the structure of the  $\beta$  subunit of G proteins. It is not a substrate of PKC, but in its presence, the activity of PKC is increased by several fold.<sup>1</sup> In addition to anchoring activated PKC, RACK1 anchors other signaling enzymes such as Src tyrosine kinase<sup>2,3</sup>, integrin<sup>4</sup> and phosphodiesterase 4D5.<sup>5</sup> 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.<sup>6</sup> In addition, RACK1 is a ribosomal protein.<sup>7,8</sup> 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.<sup>9</sup>

#### Reagent

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

#### 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 dilution of 1:500-1:1,000 is recommended using HEK-293T cell lysates.

Immunoprecipitation: a working amount of 5-10  $\mu$ L is recommended using HEK-293T cell lysates.

Immunofluorescence: a working dilution of 1:100-1:200 is recommended using paraformaldehyde-fixed HeLa cells.

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

#### References

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