

# Product Data Sheet

## RACK1 Protein, Human (His-MBP)

Cat. No.:	HY-P74606
Synonyms:	Receptor of activated protein C kinase 1; HLC-7; RACK1; GNB2L1
Species:	Human
Source:	E. coli
Accession:	P63244 (M1-R317)
Gene ID:	10399
Molecular Weight:	Approximately 70 kDa

#### PROPERTIES **AA Sequence** MTEQMTLRGT LKGHNGWVTQ IATTPQFPDM ILSASRDKTI IMWKLTRDET NYGIPQRALR GHSHFVSDVV ISSDGQFALS GSWDGTLRLW DLTTGTTTRR FVGHTKDVLS VAFSSDNRQI VSGSRDKTIK LWNTLGVCKY TVQDESHSEW VSCVRFSPNS SNPIIVSCGW DKLVKVWNLA NCKLKTNHIG HTGYLNTVTV SPDGSLCASG GKDGQAMLWD LNEGKHLYTL DGGDIINALC FSPNRYWLCA ATGPSIKIWD LEGKIIVDEL KQEVISTSSK AEPPQCTSLA WSADGQTLFA GYTDNLVRVW QVTIGTR Appearance Lyophilized powder Formulation Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. **Endotoxin Level** <1 EU/µg, determined by LAL method. Reconsititution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O.For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. Shipping Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

RACK1, functioning as a versatile scaffolding protein, intricately participates in diverse cellular processes by recruiting, assembling, and regulating various signaling molecules. As a component of the 40S ribosomal subunit, it contributes to translational repression and is pivotal in initiating the ribosome quality control (RQC) pathway, particularly by promoting

the ubiquitination of a subset of 40S ribosomal subunits. RACK1 binds and stabilizes activated protein kinase C (PKC), thereby enhancing PKC-mediated phosphorylation and potentially recruiting it to the ribosome for the phosphorylation of EIF6. Furthermore, RACK1 exerts inhibitory effects on SRC kinases, including SRC, LCK, and YES1, leading to cell cycle arrest at the G0/G1 phase. Its regulatory role extends to diverse cellular functions, such as modulating integrin signaling, promoting apoptosis, regulating membrane localization of various receptors, and influencing cell migration. Additionally, RACK1 is implicated in pathogen-host interactions, as evidenced by its binding to Yersinia pseudotuberculosis yopK, resulting in the inhibition of phagocytosis and facilitating bacterial survival within host cells.

#### Caution: Product has not been fully validated for medical applications. For research use only.

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