

## Active Recombinant Human ROCK1 Protein, GST-tagged

**Cat. No.** ROCK1-1480H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Product Overview</b> | Recombinant human ROCK1 (17-535) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>           | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 17-535 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>      | ROCK1 is a ubiquitously expressed serine/threonine kinase that is a downstream target of the small GTPase RhoA. ROCK1 is involved in diverse cellular functions, including smooth muscle contraction, actin cytoskeleton organization, cell adhesion and motility, and gene expression. ROCK1 contributes to the development of cardiac fibrosis and induction of fibrogenic cytokines in cardiomyocytes in response to pathological stimuli. ROCK1 knockout mice exhibit reduced perivascular and interstitial fibrosis which is associated with reduced expression of a variety of extracellular matrix (ECM) proteins and fibrogenic cytokines. |
| <b>Form</b>             | Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Bio-activity</b>     | 65 nmol/min/mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Molecular Mass</b>   | ~85 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <b>Purity</b>           | >90%                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>     | Kinase Assay, Western Blot                                                                                                                                                                                                                                                                                                                          |
| <b>Storage</b>          | Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.                                                                                                                                                                                    |
| <b>Concentration</b>    | 0.1µg/µl                                                                                                                                                                                                                                                                                                                                            |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Gene Name</b>        | ROCK1 Rho-associated, coiled-coil containing protein kinase 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                      |
| <b>Official Symbol</b>  | ROCK1                                                                                                                                                                                                                                                                                                                                               |
| <b>Synonyms</b>         | ROCK1; Rho-associated, coiled-coil containing protein kinase 1; rho-associated protein kinase 1; p160ROCK; p160-ROCK; Rho kinase; p160 ROCK-1; renal carcinoma antigen NY-REN-35; rho-associated, coiled-coil-containing protein kinase 1; rho-associated, coiled-coil-containing protein kinase I; ROCK-I; P160ROCK; PRO0435; MGC43611; MGC131603; |
| <b>Gene ID</b>          | 6093                                                                                                                                                                                                                                                                                                                                                |
| <b>mRNA Refseq</b>      | NM_005406                                                                                                                                                                                                                                                                                                                                           |
| <b>Protein Refseq</b>   | NP_005397                                                                                                                                                                                                                                                                                                                                           |
| <b>MIM</b>              | 601702                                                                                                                                                                                                                                                                                                                                              |
| <b>UniProt ID</b>       | Q13464                                                                                                                                                                                                                                                                                                                                              |

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b> | 18q11.2                                                                                                                                                                                                                                                                                                                                                    |
| <b>Pathway</b>             | Apoptosis, organism-specific biosystem; Apoptotic cleavage of cellular proteins, organism-specific biosystem; Apoptotic executionphase, organism-specific biosystem; Axon guidance, organism-specific biosystem; Axon guidance, conserved biosystem; Axon guidance, organism-specific biosystem; Chemokine signaling pathway, organism-specific biosystem; |
| <b>Function</b>            | ATP binding; GTP-Rho binding; metal ion binding; nucleotide binding; protein binding; protein kinase activity; protein serine/threonine kinase activity;                                                                                                                                                                                                   |

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