

Human ROCK1 Protein, His Tag (active enzyme)

Catalog # RO1-H55H3



BIOSYSTEMS
Acro

Synonyms

ROCK1

Source

Human ROCK1 Protein, His Tag (RO1-H55H3) is expressed from Baculovirus-Insect cells. It contains AA Met 1 - Leu 535 (Accession # [Q13464](#)).

Predicted N-terminus: Met 1

Molecular Characterization

ROCK1(Met 1 - Leu 535)
Q13464

Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 64.1 kDa. The protein migrates as 60-65 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with glycerol as protectant.

Contact us for customized product form or formulation.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

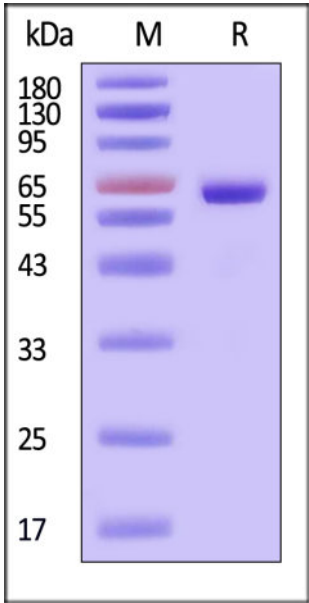
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

ACRO Quality Management System

- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



Human ROCK1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity

The ROCK1 assay is performed using the ADP-Glo™ Kinase Assay kit which quantifies the amount of ADP produced by the ROCK1 reaction. The ADP- Glo™ Reagent is added to terminate the kinase reaction and to deplete the remaining ATP, and then the Kinase Detection Reagent is added to convert ADP to ATP and to measure the newly synthesized ATP using luciferase/luciferin reaction. The specific activity is >60 pmol/min/ug (QC tested).

Background

ROCK1 (Rho-associated coiled-coil containing protein kinase 1) is a serine/threonine kinase and a major downstream effector of the small GTPase RhoA. It regulates actin cytoskeleton organization, promoting stress fiber formation, focal adhesion assembly, and contractile force generation. Structurally, ROCK1 contains an N-terminal kinase domain, a central coiled-coil region with a Rho-binding domain, and a C-terminal pleckstrin homology domain. It plays critical roles in cell motility, adhesion, cytokinesis, and apoptosis, and is implicated in cancer progression, cardiovascular diseases, and neurological disorders. ROCK1 activity is tightly controlled by RhoA binding and autoinhibition, making it a potential therapeutic target in multiple pathologies.

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