Recombinant ROCK2 protein (His tag)

Catalog Number	546528
Synonyms	Rho kinase 2; Rho-associated, coiled-coil-containing protein kinase 2; Rho-associated, coiled-coil-containing protein kinase II; ROCK-II; p164 ROCK-2
Species	Human
Expression System	E. coli
Accession	O75116
Molecular Weight	Predictes a molecular mass of 49.35 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Amino Acid Sequence	MSKIKHHHHH HSSGMSRPPP TGKMPGAPET APGDGAGASR QRKLEALIRD PRSPINVESL LDGLNSLVLD LDFPALRKNK NIDNFLNRYE KIVKKIRGLQ MKAEDYDVVK VIGRGAFGEV QLVRHKASQK VYAMKLLSKF EMIKRSDSAF FWEERDIMAF ANSPWVVQLF YAFQDDRYLY MVMEYMPGGD LVNLMSNYDV PEKWAKFYTA EVVLALDAIH SMGLIHRDVK PDNMLLDKHG HLKLADFGTC MKMDETGMVH CDTAVGTPDY ISPEVLKSQG GDGFYGRECD WWSVGVFLYE MLVGDTPFYA DSLVGTYSKI MDHKNSLCFP EDAEISKHAK NLICAFLTDR EVRLGRNGVE EIRQHPFFKN DQWHWDNIRE TAAPVVPELS SDIDSSNFDD IEDDKGDVET FPIPKAFVGN QLPFIGFTYY REN
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-419 aa (O75116) were fused with N-terminal 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 µg/µl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

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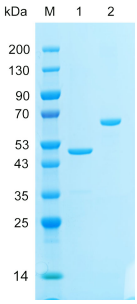
Recombinant Human Rho-associated protein kinase 2 (ROCK2) fragment (residues 1-419) is a high-purity protein encompassing the complete protein kinase domain. This fragment serves as an essential tool for investigating ROCK2's role in cytoskeletal regulation, cell polarity, and contractile signaling, enabling targeted studies of kinase activity and domain-specific interactions.
Rho-associated protein kinase 2 (ROCK2) is a serine/threonine kinase that functions as a master regulator of actin cytoskeleton organization, cell polarity, and smooth muscle contraction. It phosphorylates key substrates including MYL9/MLC2, RDX, and PPP1R12A to modulate stress fiber formation, focal adhesion dynamics, and cellular motility. ROCK2 also contributes to neurite retraction, centrosome duplication, and circadian regulation of vascular contractility. Located primarily in the cytoplasm, it associates with actin microfilaments, the plasma membrane, and centrosomes, positioning it at critical cellular sites for coordinating structural and signaling events.

Validation

SDS-PAGE



Recombinant ROCK2 protein (His tag) SDS-PAGE
M: Marker; Lane 1: ROCK2; Lane 2: BSA