

Recombinant Human PRC1 Protein (His Tag)

Catalog No. PKSH030666

Note: Centrifuge before opening to ensure complete recovery of vial contents.

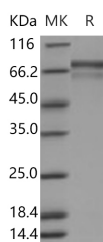
Description

Synonyms	ASE1
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Ser 620
Accession	NP_003972.1
Calculated Molecular Weight	74.0 kDa
Observed molecular weight	75 kDa
Tag	N-His
Bioactivity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 20% glycerol, 3mM DTT Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

PRC1 (protein regulator of cytokinesis 1) is a key regulator of cytokinesis that cross-links antiparallel microtubules at an

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average distance of 35 nM. It is essential for controlling the spatiotemporal formation of the midzone and successful cytokinesis. PRC1 is required for KIF14 localization to the central spindle and midbody. It is also required to recruit PLK1 to the spindle. PRC1 stimulates PLK1 phosphorylation of RACGAP1 to allow recruitment of ECT2 to the central spindle. It is a homodimer and interacts with the C-terminal Rho-GAP domain and the basic region of RACGAP1. The interaction with RACGAP1 inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology. PRC1 also interacts separately via its N-terminal region with the C-terminus of CENPE, KIF4A and KIF23 during late mitosis. It interacts with KIF14, IF20A and PLK1.