PRC1 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	PRC1, Recombinant Protein
Full Product Name	Recombinant Human PRC1 Protein (His tag)
Product Gene Name	PRC1 recombinant protein
Product Synonym Names	ASE1
Host	Baculovirus-Insect Cells
Form/Format	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 20% gly, 3mM DTT
Purity/Purification	> 95 % as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -70 degree C
Molecular Weight	70,191 Da
OMIM	AF044588 mRNA
3D Structure	ModBase 3D Structure for O43663
Predicted N Terminal	Met
Endotoxin	< 1.0 EU per mug of the protein as determined by the LAL method
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Application Notes for PRC1 recombinant protein	The recombinant human PRC1 consists of 639 amino acids and predicts a molecular mass of 74 kDa. It migrates as an approximately 75 KDa band in SDS-PAGE under reducing conditions.
Related Product Information for PRC1 recombinant protein	Background: PRC1 (protein regulator of cytokinesis 1) is a key regulator of cytokinesis that cross-links antiparrallel microtubules at an 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. Description: A DNA sequence encoding the human PRC1 isoform 1 (NP_003972.1) (Met 1-Ser 620) was expressed, with a polyhistidine tag at the N-terminus.
Other Notes	Small volumes of PRC1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PRC1 purchase	MBS2545340 is a recombinant protein targeting PRC1. Also known as Recombinant Human PRC1 Protein (His tag). Host: Baculovirus-Insect Cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRC1. It may not necessarily be applicable to this product.

NCBI GI #	4506039
NCBI GeneID	9055

NCBI Accession #	NP_003972.1
UniProt Primary Accession #	O43663
UniProt Secondary Accession #	Q9BSB6; A6NC44; B4DLR1; H9KV59
UniProt Related Accession #	O43663
GenBank Nucleotide #	NM_003981.3
NCBI Official Full Name	protein regulator of cytokinesis 1 isoform 1
NCBI Official Synonym Full Names	protein regulator of cytokinesis 1
NCBI Official Symbol	PRC1
NCBI Official Synonym Symbols	ASE1
UniProt Protein Name	Protein regulator of cytokinesis 1
Protein Family	Protein regulator of cytokinesis
UniProt Gene Name	PRC1
NCBI Protein Information	protein regulator of cytokinesis 1
NCBI Summary for PRC1	This gene encodes a protein that is involved in cytokinesis. The protein is present at high levels during the S and G2/M phases of mitosis but its levels drop dramatically when the cell exits mitosis and enters the G1 phase. It is located in the nucleus during interphase, becomes associated with mitotic spindles in a highly dynamic manner during mitosis, and localizes to the cell mid-body during cytokinesis. This protein has been shown to be a substrate of several cyclin-dependent kinases (CDKs). It is necessary for polarizing parallel microtubules and concentrating the factors responsible for contractile ring assembly. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jun 2012]
UniProt Comments for PRC1	PRC1: translocates to the plus ends of interdigitating spindle microtubules during the metaphase to anaphase transition, an essential step for the formation of an organized central spindle midzone and midbody and for successful cytokinesis. Acts as a microtubule-binding and bundling protein both in vivo and vitro. Interacts with the C-terminal Rho-GAP domain and the basic region of MgcRacGAP. The interaction with MgcRacGAP inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology. Interacts separately via its N-terminal region with the C-terminus of CENPE, KIF4A and KIF23 during late mitosis. Protein type: Cell cycle regulation; Cytoskeletal; Microtubule-binding; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 15q26.1 Cellular Component: cytoplasm; cytosol; microtubule cytoskeleton; midbody; nucleoplasm; nucleus; plasma membrane; spindle; spindle microtubule Molecular Function: kinesin binding; protein binding; protein kinase binding Biological Process: cytokinesis; mitotic spindle elongation; positive regulation of cell proliferation
Research Articles on PRC1	**1.** These findings suggest that the aberrant expression of PRC1 may predict biochemical recurrence in men with prostate cancer highlighting its potential as a prognostic marker of this malignancy.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.

Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/recombinant-protein/prc1/2545340