

## PRC1 Protein, Human (sf9, His)

Cat. No.:	HY-P74620
Synonyms:	Protein regulator of cytokinesis 1; PRC1
Species:	Human
Source:	Sf9 insect cells
Accession:	O43663 (M1-S620)
Gene ID:	9055
Molecular Weight:	Approximately 75 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 20 mM Tris, 500 mM NaCl, pH 8.0, 20% Glycerol, 3 mM DTT. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	PRC1, a pivotal regulator of cytokinesis, plays a crucial role in orchestrating the spatiotemporal formation of the midzone and ensuring successful cytokinesis by cross-linking antiparallel microtubules at an average distance of 35 nM. Its indispensability extends to the recruitment of key proteins such as KIF14, PLK1, and ECT2 to the central spindle and midbody, essential steps for proper cell division. In addition to its fundamental role in cellular processes, PRC1 exhibits oncogenic properties, promoting proliferation, inhibiting apoptosis, and contributing to the carcinogenic progression of bladder cancer cells. As a homodimer, PRC1 interacts with various proteins, including RACGAP1, CENPE, KIF4A, KIF23, and PLK1, forming a complex network of molecular interactions crucial for its multifaceted functions during mitosis. The intricate interplay of PRC1 with these proteins underscores its significance in the intricate machinery governing cell division and highlights its potential as a target for therapeutic interventions in cancer.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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