

Recombinant Human RAD1 Protein (His Tag)

Catalog Number: PDEH100995

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

Description

Species	Human
Source	E.coli-derived Human RAD1 protein Met1-Ser282, with an N-terminal His & C-terminal His
Calculated MW	30.9 kDa
Observed MW	35 kDa
Accession	O60671
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg 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 a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Background

Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair. The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex. Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER). The 9-1-1 complex stimulates DNA polymerase beta (POLB) activity by increasing its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds, endonuclease FEN1 cleavage activity on substrates with double, nick, or gap flaps of distinct sequences and lengths, and DNA ligase I (LIG1) on long-patch base excision repair substrates. Isoform 1 possesses 3'→5' double stranded DNA exonuclease activity.

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