## **Recombinant Human BRCA1 Protein (His Tag)**

## Catalog Number: PDEH100689

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

Description	
Species	Human
Source	E.coli-derived Human BRCA1 protein Ser1610-Tyr1863, with an N-terminal His
Calculated MW	28.8 kDa
Observed MW	31.1 kDa
Accession	P38398-1
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 $< -20^{\circ}$ C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 $\mu m$ 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

RCA 1,also named as RNF53,plays a central role in DNA repair by facilitating cellular response to DNA repair. It is required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle. The BRCA 1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. BRCA 1 acts by mediating ubiquitin E3 ligase activity that is required for its tumor suppressor function. It is involved in transcriptional regulation of P21 in response to DNA damage. BRCA 1 is required for FANCD2 targeting to sites of DNA damage. It may function as a transcriptional regulator. BRCA 1 inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation. The antibody is specific to BRCA 1. BRCA 1 appears to produce multiple splice variants. BRCA 1 is a nuclear protein with a molecular mass of 220 kDa. The present study describes the isolation and expression of two cDNAs of BRCA 1,including a splice variant designated BRCA 1D672-4095. BRCA 1D672-4095 is generated by exclusion of exon 11 by in-frame splicing and produces a 97 kDa protein. In contrast to BRCA 1,BRCA 1D672-4095 localizes to the cytoplasm.