

## Recombinant Human BRCA1 Protein (His Tag)

Catalog Number: PDEH100689

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

### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human BRCA1 protein Ser1610-Tyr1863, with an N-terminal His
<b>Mol_Mass</b>	28.8 kDa
<b>Accession</b>	P38398-1
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95% as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 10 EU/mg of the protein as determined by the LAL method
<b>Storage</b>	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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Reconstitution</b>	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

BRCA1, also named as RNF53, plays a central role in DNA repair by facilitating cellular response to DNA damage. 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 BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. BRCA1 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. BRCA1 is required for FANCD2 targeting to sites of DNA damage. It may function as a transcriptional regulator. BRCA1 inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation. The antibody is specific to BRCA1. BRCA1 appears to produce multiple splice variants. BRCA1 is a nuclear protein with a molecular mass of 220 kDa. The present study describes the isolation and expression of two cDNAs of BRCA1, including a splice variant designated BRCA1D672-4095. BRCA1D672-4095 is generated by exclusion of exon 11 by in-frame splicing and produces a 97 kDa protein. In contrast to BRCA1, BRCA1D672-4095 localizes to the cytoplasm.

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