

Recombinant Human BRCA1, GST-tagged

Cat. No. BRCA1-10279H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human BRCA1 protein, fused to GST-tag, was expressed in E.coli and purified by GSH-sepharose.

Species Human

Source E.coli

ProteinLength C-term-350a.a.

Description

This gene encodes a nuclear phosphoprotein that plays a role in maintaining genomic stability, and it also acts as a tumor suppressor. The encoded protein combines with other tumor suppressors, DNA damage sensors, and signal transducers to form a large multi-subunit protein complex known as the BRCA1-associated genome surveillance complex (BASC). This gene product associates with RNA polymerase II, and through the C-terminal domain, also interacts with histone deacetylase complexes. This protein thus plays a role in transcription, DNA repair of double-stranded breaks, and recombination. Mutations in this gene are responsible for approximately 40% of inherited breast cancers and more than 80% of inherited breast and ovarian cancers. Alternative splicing plays a role in modulating the subcellular localization and physiological function of this gene. Many alternatively spliced transcript variants, some of which are disease-associated mutations, have been described for this gene, but the full-length natures of only some of these variants has been described. A related pseudogene, which is also located on chromosome 17, has been identified.

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Storage	The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.
Storage Buffer	1M PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH8.) added with 100mM GSH and 1% Triton X-100, 15% glycerol.
GENE INFORMATION	
Gene Name	BRCA1 breast cancer 1, early onset [Homo sapiens]
Official Symbol	BRCA1
Synonyms	BRCA1; breast cancer 1, early onset; breast cancer type 1 susceptibility protein; BRCA1/BRCA2 containing complex; subunit 1; BRCC1; PPP1R53; protein phosphatase 1; regulatory subunit 53; RNF53; RING finger protein 53; BRCA1/BRCA2-containing complex, subunit 1; protein phosphatase 1, regulatory subunit 53; breast and ovarian cancer susceptibility protein 1; breast and ovarian cancer susceptibility protein 1; IRIS; PSCP; BRCAI; PNCA4; BROVCA1;
Gene ID	672
mRNA Refseq	NM_007294
Protein Refseq	NP_009225
MIM	113705
UniProt ID	P38398
Chromosome Location	17q21-q24

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Pathway

ATF-2 transcription factor network, organism-specific biosystem; ATM mediated phosphorylation of repair proteins, organism-specific biosystem; ATM mediated response to DNA double-strand break, organism-specific biosystem; Androgen Receptor Signaling Pathway, organism-specific biosystem; Aurora A signaling, organism-specific biosystem; BARD1 signaling events, organism-specific biosystem; BRCA1-associated genome surveillance complex (BASC), organism-specific biosystem;

Function

DNA binding; DNA binding; RNA binding; androgen receptor binding; damaged DNA binding; enzyme binding; ligase activity; metal ion binding; protein binding; transcription coactivator activity; transcription regulatory region DNA binding; tubulin binding; u

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