

Recombinant Human TP53BP1, GST-tagged

Cat. No. TP53BP1-15H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human TP53BP1, fused with GST-tag at N-terminal, was expressed in E. coli.
Species	Human
Source	E.coli
Description	The BRCA1 C-terminal (BRCT) domain is a modular unit of ~100 amino acids that folds independently and recognizes linear phosphoserine or phosphothreonine regions to mediate protein-protein and protein-DNA interactions. BRCT domains were initially recognized in the C-terminal region of the breast cancer protein BRCA1, as well as the p53 binding protein (53BP1; TP53BP1), and the yeast cell cycle checkpoint protein RAD9. BRCT domains often occur as tandem repeats at the C-terminal end of several proteins that are functionally diverse. Most BRCT domain-containing proteins participate in DNA-damage checkpoint control or DNA-repair pathways, or both. Thus, BRCT domain-containing proteins likely participate in the cellular response to DNA damage. The BRCT domains of TP53BP1 bind to the DNA binding domain region of the tumor suppressor protein p53. The residues of p53 involved in this binding are often mutated in cancer. Binding of TP53BP1 to p53 occurs through the first BRCT domain and the inter-domain linker between the BRCT repeats. TP53BP1 binds to wild-type but not mutant p53 protein, which was believed to mediate p53 tumor suppressor function. More recently, recruitment to DNA double strand breaks has shown to be mediated by the TP53BP1 tudor domain region binding to dimethylated lysine on p53 and histone H4. This product contains the

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BRCT domains of TP53BP1.

Form	50 mM Tris-HCl, pH 8.0, containing 150 mM sodium chloride and 20% glycerol
Molecular Mass	55.1 kDa
Purity	≥90%
Stability	6 months
Storage	-80°C
Shipping	Dry ice in continental US; may vary elsewhere

GENE INFORMATION

Gene Name	TP53BP1 tumor protein p53 binding protein 1 [Homo sapiens (human)]
Official Symbol	TP53BP1
Synonyms	TP53BP1; tumor protein p53 binding protein 1; tumor protein p53 binding protein, 1; tumor suppressor p53-binding protein 1; 53BP1; p202
Gene ID	7158
mRNA Refseq	NM_001141979
Protein Refseq	NP_001135451
MIM	605230

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UniProt ID	Q12888
Chromosome Location	15q15-q21
Pathway	Double-Strand Break Repair; Homologous Recombination Repair; Homologous recombination repair of replication-independent double-strand breaks
Function	RNA polymerase II activating transcription factor binding; RNA polymerase II transcription cofactor activity; damaged DNA binding

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