

PRODUCT INFORMATION



TP53BP1 BRCT domains (human, recombinant)

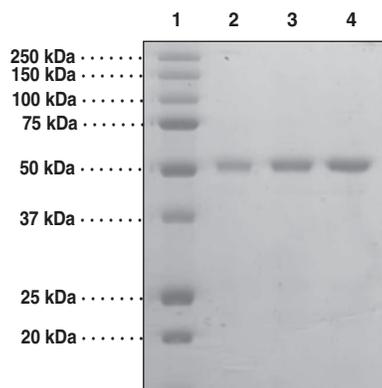
Item No. 14171

Overview and Properties

Synonyms: Tumor Protein p53 binding Protein 1, Tumor Suppressor p53-binding Protein 1
Source: Recombinant human N-terminal GST-tagged protein expressed in *E. coli*
Amino Acids: 1,717-1,972 (N- and C-terminal truncation)
Uniprot No.: Q12888
Molecular Weight: 55.1 kDa
Storage: -80°C (as supplied)
Stability: ≥6 months
Purity: *batch specific* (≥90% estimated by SDS-PAGE)
Supplied in: 50 mM Tris-HCl, pH 8.0, with 150 mM sodium chloride and 20% glycerol
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: TP53BP1 BRCT domains (1 µg)
Lane 3: TP53BP1 BRCT domains (2 µg)
Lane 4: TP53BP1 BRCT domains (5 µg)

Representative gel image shown; actual purity may vary between each batch.

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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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.¹ 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 RAD9.² BRCT domains often occur as tandem repeats at the C-terminal end of several proteins that are functionally diverse.³ Most BRCT domain-containing proteins participate in DNA-damage checkpoint control or DNA-repair pathways, or both.^{2,4} 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.⁵⁻⁷ 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.⁶ 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 H4.⁸⁻⁹ This product contains the BRCT domains of TP53BP1.

References

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