BCCIP Protein, Human (sf9, His-GST)

Cat. No.:	HY-P76747
Synonyms:	BRCA2 and CDKN1A-interacting protein; P21- and CDK-associated protein 1; TOK1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9P287 (M1-V314)
Gene ID:	56647
Molecular Weight:	Approximately 65 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, 3 mM DTT, 10% Glycerol, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	BCCIP, a multifaceted protein, plays crucial roles during interphase and mitosis. In interphase, it is essential for microtubule organizing and anchoring activities, while during mitosis, it contributes significantly to spindle pole organization and stabilization. Notably, isoform 2/alpha emerges as particularly vital in regulating microtubule anchoring, stability, spindle architecture, and orientation, compared to isoform 1/beta. Beyond its structural functions, BCCIP may exert control over the cell cycle by enhancing CDKN1A-mediated inhibition of CDK2 activity, potentially promoting cell cycle arrest. Furthermore, BCCIP may play a role in DNA damage repair through homologous recombination, likely in conjunction with BRCA2, while its involvement in non-homologous end joining (NHEJ) remains unclear. BCCIP engages in diverse interactions, forming complexes with BRCA2, CDKN1A, MTDH/LYRIC, DCTN1/p150-glued, ACTR1A/ARP1, and tubulin subunits. Isoforms 1 and 2 exhibit distinct interaction profiles, with both associating with alpha-, beta-, and gamma-tubulins. Additionally, BCCIP interacts with TENT5C, although this interaction does not impact TENT5C poly(A) polymerase function.

Caution: Product has not been fully validated for medical applications. For research use only.

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