

## BCCIP Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	BRCA2 and CDKN1A interacting protein; TOK-1; TOK1
Protein Construction:	A DNA sequence encoding the human BCCIP (AAH09771.1) (Met1-Val314) was expressed with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	AAH09771.1
Molecular Weight:	64 kDa (predicted); 65 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 80 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 3 mM DTT, 10% glycerol, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

BCCIP was originally identified as a BRCA2 and CDKN1A interacting protein that has been implicated in maintenance of genomic stability, cell cycle regulation, and microtubule dynamics. The secondary genetic alternations may overcome the progression suppression imposed by BCCIP deficiency through a synthetic viability mechanism. Knockdown of YY1 inhibited the binding of BCCIP itself at BCCIP promoter region proximal to TSS, demonstrating that transcriptional regulation of the YY1 on BCCIP can be modulated by BCCIP itself in a YY1-

dependent fashion. BCCIP (BRCA2 and CDKN1A interacting protein) plays a critical role in maintaining the critical functions of p53 in tumor suppression and response to therapy. Celecoxib affects the functions of p53 and inhibits the recovery from the irradiation-induced injury by up-regulating the expression of BCCIP, and subsequently regulates the expressions of genes such as p21 and Cyclin B1 to enhance the radiosensitivity of HCT116 cells in a COX-2 independent manner.

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