

XIAP Protein, Human, Recombinant (His)

General Information

Synonyms:	hIAP-3;API3;XLP2;ILP1;MIHA;X-linked inhibitor of apoptosis, E3 ubiquitin protein ligase;IAP-3;BIRC4;hIAP3
Protein Construction:	A DNA sequence encoding the human BIR3 domain of XIAP (NP_001158.2) (Asn252-Thr356) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P98170
Molecular Weight:	14.3 kDa (predicted); 14.8 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:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, 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

E3 ubiquitin-protein ligase XIAP / BIRC4, also known as an inhibitor of apoptosis protein 3, X-linked inhibitor of apoptosis protein, and IAP-like protein, is a protein that belongs to a family of apoptotic suppressor proteins. Members of this family share a conserved motif termed, baculovirus IAP repeat, which is necessary for their anti-apoptotic function. XIAP / BIRC4 functions through binding to tumor necrosis factor receptor-associated factors

TRAF1 and TRAF2 and inhibits apoptosis induced by menadione, a potent inducer of free radicals, and interleukin 1-beta converting enzyme. XIAP / BIRC4 also inhibits at least two members of the caspase family of cell-death proteases, caspase-3 and caspase-7. Mutations in this encoding gene are the cause of X-linked lymphoproliferative syndrome. Alternate splicing results in multiple transcript variants. Thought to be the most potent apoptosis suppressor, XIAP / BIRC4, directly binds and inhibits caspases -3, -7 and -9. Survivin, which also binds to several caspases, is up-regulated in a many tumour cell types. Defects in XIAP / BIRC4 are the cause of lymphoproliferative syndrome X-linked type 2 (XLP2). XLP is a rare immunodeficiency characterized by extreme susceptibility to infection with Epstein-Barr virus (EBV). Symptoms include severe or fatal mononucleosis, acquired hypogammaglobulinemia, pancytopenia and malignant lymphoma.

Reference

Holcik M, et al. (2000) Functional Characterization of the X-Linked Inhibitor of Apoptosis (XIAP) Internal Ribosome Entry Site Element: Role of La Autoantigen in XIAP Translation. *Mol Cell Biol.* 20 (13): 4648-57.

Winsauer G, et al. (2008) XIAP regulates bi-phasic NF-kappaB induction involving physical interaction and ubiquitination of MEKK2. *Cell Signal.* 20 (11): 2107-12.

Suzuki Y, et al. (2001) X-linked inhibitor of apoptosis protein (XIAP) inhibits caspase-3 and -7 in distinct modes. *J Biol Chem.* 276 (29): 27058-63.

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