

Livin/BIRC7 Protein, Human (His)

Cat. No.:	HY-P77065
Synonyms:	Baculoviral IAP repeat-containing protein 7; KIAP; MLIAP; RNF50
Species:	Human
Source:	E. coli
Accession:	Q96CA5 (M1-S298)
Gene ID:	79444
Molecular Weight:	Approximately 35 kDa

PROPERTIES

AA Sequence	<pre> M G P K D S A K C L H R G P Q P S H W A A G D G P T Q E R C G P R S L G S P V L G L D T C R A W D H V D G Q I L G Q L R P L T E E E E E E G A G A T L S R G P A F P G M G S E E L R L A S F Y D W P L T A E V P P E L L A A A G F F H T G H Q D K V R C F F C Y G G L Q S W K R G D D P W T E H A K W F P S C Q F L L R S K G R D F V H S V Q E T H S Q L L G S W D P W E E P E D A A P V A P S V P A S G Y P E L P T P R R E V Q S E S A Q E P G G V S P A E A Q R A W W V L E P P G A R D V E A Q L R R L Q E E R T C K V C L D R A V S I V F V P C G H L V C A E C A P G L Q L C P I C R A P V R S R V R T F L S </pre>
Biological Activity	Measured by its ability to inhibit DEVD-AFC cleavage activity in cell extracts activated by addition of cytochrome c and dATP. The IC ₅₀ value is 1.223 nM, as measured under the described conditions.
Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 200 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	<p>Livin/BIRC7, an apoptotic regulator, intricately modulates both proapoptotic and anti-apoptotic activities, holding pivotal roles in apoptosis, cell proliferation, and cell cycle control. Its anti-apoptotic prowess stems from the inhibition of CASP3,</p>
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CASP7, and CASP9, coupled with its E3 ubiquitin-protein ligase activity. Despite its classification as a weak caspase inhibitor, Livin's anti-apoptotic function is attributed to its capability to ubiquitinate DIABLO/SMAC, directing it for degradation and thereby fostering cell survival. Furthermore, Livin may hinder DIABLO/SMAC from disrupting XIAP/BIRC4-caspase interactions, potentially contributing to caspase inhibition. Notably, Livin safeguards against apoptosis induced by TNF or chemical agents like adriamycin, etoposide, or staurosporine. This protective effect is facilitated through the activation of MAPK8/JNK1 and possibly MAPK9/JNK2, contingent upon TAB1 and MAP3K7/TAK1. Livin's multifaceted functions also extend to inhibiting CASP3 and impeding the proteolytic activation of pro-CASP9 in vitro, as well as blocking staurosporine-induced apoptosis. Moreover, Livin promotes natural killer (NK) cell-mediated killing, underscoring its diverse regulatory roles in cellular processes.

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

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