3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Livin β/ML-IAP
Human, Recombinant
Expressed in *E. coli*

Product Number **L 1040**

Product Description

Recombinant Human Livin β/ML-IAP is produced from a DNA sequence corresponding to amino acids 1-280 of human Livin β/ML-IAP (accession number AF311388) with a six histidine tag fused to the C-terminus. Recombinant human Livin β/ML-IAP migrates to approximately 32 kDa on non-reducing and reducing SDS-PAGE.

Apoptosis is prevented by the inhibitor of apoptois (IAP) proteins. IAP proteins are a conserved gene family that binds to and inhibits cell death proteases. Livin, a member of the IAP protein family, contains a single BIR (baculoviral IAP repeat) domain and a RING finger domain and has two isoforms (Livin-α and Livin-β).[1, 2] Livin β is the shorter of two splice variants, missing the first 54 bp from the 5′ end of exon 6, encoding 18 amino acids residues in the BIR-RING linking region.

Cells transfected with livin are protected from apoptosis induced by FADD, BAX, RIP, RIP3, and DR6.[1] Livin directly interacts with caspase 3 and caspase 7. It inhibits the acivation of caspase 9 in cell extracts activated by cytochrome c and dATP.

Livin/ML-IAP is expressed in a number of embryonic tissues and tumor cell lines and is preferentially expressed in human melanomas.[3]

Reagent

Recombinant Human Livin β/ML-IAP is supplied as approximately 100 µg of protein from a 0.2 µm filtered solution in 25 mM HEPES, pH 7.5, 0.1 M sodium chloride, and 1 mM dithiothreitol.

Concentration is approximately 1.1 mg/ml

Storage/Stability

Aliquot and store at −20 °C. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

Product Profile

Recombinant Human Livin β/ML-IAP is measured by its ability to inhibit cleavage of the fluorescent caspase substrate DEVD-afc (N-Acetyl-Asp-Glu-Val-Asp-7-amido-4-trifluoromethylcoumarin, Sigma Product No. A 0466) in cell extracts (2×10^6 cells) activated by the addition of cytochrome c and dATP.

The typical amount of Livin β/ML-IAP required to inhibit DEVD-afc cleavage by 50% in activated cell extracts is between 1.0 and 2.0 µM.

Each laboratory should determine their own optimal dilutions for each application.

Purity: > 95% as determined by SDS-PAGE, visualized by silver stain.

References

1. Kasof, G.M., and Gomes, B.C., Livin, a novel inhibitor of apoptosis protein family member. J. Biol. Chem., **276**, 3238-3246 (2001).
2. Ashhab, Y., et al., Two splicing variants of a new inhibitor of apoptosis gene with different biological properties and tissue distribution pattern. FEBS Lett., **495**, 56-60 (2001).
3. Vucic, D., et al., ML-IAP, a novel inhibitor of apoptosis that is preferentially expressed in human melanomas. Curr. Biol., **10**, 1359-1366 (2000).

kaa 01/03