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Livin Antibody

Catalog # ASC10155

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q96CA5
Other Accession	NP_071444, 11545910
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	32798
Conjugate	Unconjugated
Application Notes	Livin antibody can be used for detection of Livin by Western blot at 0.5 g/mL. A band at 33 kDa can be detected. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	79444
Other Names	Livin Antibody: KIAP, LIVIN, MLIAP, RNF50, ML-IAP, KIAP, UNQ5800/PRO19607/PRO21344, Baculoviral IAP repeat-containing protein 7, Kidney inhibitor of apoptosis protein, baculoviral IAP repeat-containing 7
Target/Specificity	BIRC7; A lower but much weaker band at 30 kDa was detected in Raji cell lysate, which may represent the short form of Livin.
Reconstitution & Storage	Livin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Livin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BIRC7
Synonyms	KIAP, LIVIN, MLIAP, RNF50
Function	Apoptotic regulator capable of exerting proapoptotic and anti-apoptotic activities and plays crucial roles in apoptosis, cell proliferation, and cell cycle control (PubMed:11024045, PubMed:11084335, PubMed:11162435, PubMed:16729033, PubMed:17294084). Its anti-apoptotic activity is mediated through the inhibition of CASP3, CASP7 and CASP9, as well as by its E3

	ubiquitin-protein ligase activity (PubMed:11024045, PubMed:16729033). As it is a weak caspase inhibitor, its anti-apoptotic activity is thought to be due to its ability to ubiquitinate DIABLO/SMAC targeting it for degradation thereby promoting cell survival (PubMed:16729033). May contribute to caspase inhibition, by blocking the ability of DIABLO/SMAC to disrupt XIAP/BIRC4-caspase interactions (PubMed:16729033). Protects against apoptosis induced by TNF or by chemical agents such as adriamycin, etoposide or staurosporine (PubMed:11084335, PubMed:11162435, PubMed:11865055). Suppression of apoptosis is mediated by activation of MAPK8/JNK1, and possibly also of MAPK9/JNK2 (PubMed:11865055). This activation depends on TAB1 and MAP3K7/TAK1 (PubMed:11865055). In vitro, inhibits CASP3 and proteolytic activation of pro-CASP9 (PubMed:11024045).
Cellular Location	Nucleus. Cytoplasm. Golgi apparatus. Note=Nuclear, and in a filamentous pattern throughout the cytoplasm. Full-length livin is detected exclusively in the cytoplasm, whereas the truncated form (tLivin) is found in the peri-nuclear region with marked localization to the Golgi apparatus; the accumulation of tLivin in the nucleus shows positive correlation with the increase in apoptosis
Tissue Location	Isoform 1 and isoform 2 are expressed at very low levels or not detectable in most adult tissues. Detected in adult heart, placenta, lung, lymph node, spleen and ovary, and in several carcinoma cell lines. Isoform 2 is detected in fetal kidney, heart and spleen, and at lower levels in adult brain, skeletal muscle and peripheral blood leukocytes

Background

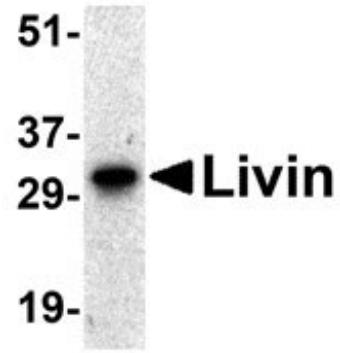
Livin Antibody: Apoptosis, or programmed cell death, is related to many diseases, such as cancer. Apoptosis is triggered by a variety of stimuli including members in the TNF family and prevented by the inhibitor of apoptosis (IAP) proteins. IAP proteins form a conserved gene family that binds to and inhibits cell death proteases. A novel member in the IAP protein family was recently identified and designated Livin and KIAP for kidney IAP. Livin/XIAP contains a single baculoviral IAP repeat (BIR) domain and a RING finger domain and has two isoforms termed Livin-alpha and Livin-beta. Transfection of Livin in cells resulted in protection from apoptosis induced by FADD, BAX, RIP, RIP3 and DR6. Livin has direct interaction with several caspases including caspase-3, -7, and -9. Livin inhibits the activation of caspase-9 induced by Apaf-1, cytochrome c, and dATP. The two isoforms of Livin appear to have different functions and tissue distributions.

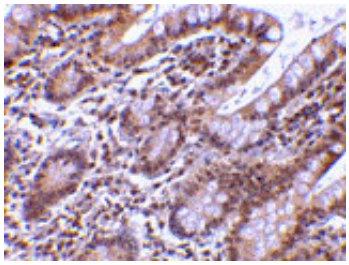
References

Kasof GM, Gomes BC. Livin, a novel inhibitor of apoptosis protein family member. J Biol Chem. 2001;276(5):3238-46.
Lin JH, Deng G, Huang Q, Morser J. KIAP, a novel member of the inhibitor of apoptosis protein family. Biochem Biophys Res Commun. 2000;279(3):820-31.
Ashhab Y, Alian A, Polliack A, Panet A, Yehuda DB. Two splicing variants of a new inhibitor of apoptosis gene with different biological properties and tissue distribution pattern. FEBS Lett. 2001;495(1-2):56-60.

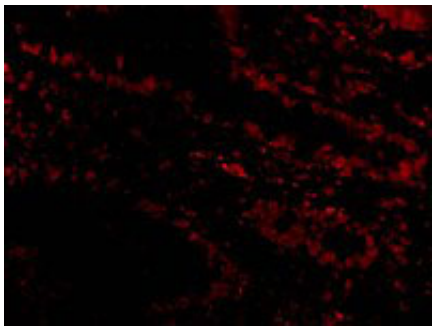
Images

Western blot analysis of Livin expression in human Raji cell lysate with Livin antibody at 0.5 µg/mL.





Immunohistochemistry of Livin in human small intestine tissue with Livin antibody at 5 µg/mL.



Immunofluorescence of Livin in Human Small Intestine cells with Livin antibody at 20 µg/mL.

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