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cIAP Antibody

Catalog # ASC10247

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q13490
Other Accession	NP_001157, 4502141
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	69900
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	cIAP antibody can be used for the detection of c-IAP by Western blot at 1 to 4 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	329
Other Names	cIAP Antibody: API1, MIHB, HIAP2, RNF48, cIAP1, Hiap-2, c-IAP1, API1, IAP2, Baculoviral IAP repeat-containing protein 2, C-IAP1, IAP-2, baculoviral IAP repeat-containing 2
Target/Specificity	BIRC2;
Reconstitution & Storage	cIAP 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	cIAP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BIRC2
Synonyms	API1, MIHB, RNF48
Function	Multi-functional protein which regulates not only caspases and apoptosis, but also modulates inflammatory signaling and immunity, mitogenic kinase signaling, and cell proliferation, as well as cell invasion and metastasis. Acts as an E3 ubiquitin-protein ligase regulating NF-kappa-B signaling and regulates both canonical and non- canonical NF-kappa-B signaling by acting in opposite directions: acts as a positive regulator of the canonical pathway and

	suppresses constitutive activation of non-canonical NF-kappa-B signaling. The target proteins for its E3 ubiquitin-protein ligase activity include: RIPK1, RIPK2, RIPK3, RIPK4, CASP3, CASP7, CASP8, TRAF2, DIABLO/SMAC, MAP3K14/NIK, MAP3K5/ASK1, IKBKG/NEMO, IKBKE and MXD1/MAD1. Can also function as an E3 ubiquitin-protein ligase of the NEDD8 conjugation pathway, targeting effector caspases for neddylation and inactivation. Acts as an important regulator of innate immune signaling via regulation of Toll-like receptors (TLRs), Nodlike receptors (NLRs) and RIG-I like receptors (RLRs), collectively referred to as pattern recognition receptors (PRRs). Protects cells from spontaneous formation of the ripoptosome, a large multi-protein complex that has the capability to kill cancer cells in a caspase-dependent and caspase- independent manner. Suppresses ripoptosome formation by ubiquitinating RIPK1 and CASP8. Can stimulate the transcriptional activity of E2F1. Plays a role in the modulation of the cell cycle.
Cellular Location	Cytoplasm. Nucleus. Note=Agents that induce either the extrinsic or intrinsic apoptotic pathways promote its redistribution from the nuclear compartment to the cytoplasmic compartment. Associated with the midbody in telophase cells, and found diffusely in the nucleus of interphase cells
Tissue Location	Present in many fetal and adult tissues. Mainly expressed in adult skeletal muscle, thymus, testis, ovary, and pancreas, low or absent in brain and peripheral blood leukocytes

Background

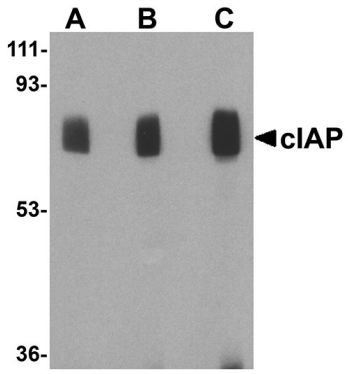
cIAP Antibody: Apoptosis, or programmed cell death, is related to many diseases, such as cancer. Apoptosis is triggered by a variety of stimuli including members in the TNF family and can be prevented by the inhibitor of apoptosis (IAP) proteins. IAP proteins form a conserved gene family that binds to and inhibits cell death proteases. The two isoforms of c-IAP (c-IAP1 and c-IAP2) are structurally related to XIAP, containing 3 baculoviral IAP repeat (BIR) motifs that are essential and sufficient for the binding and inhibition of caspases-3, -7. The c-IAPs can associate with the death receptor TNF-R2, and mediate the ubiquitinization of TRAF2 following the binding of TNF-α by its receptor. Omi, a negative regulator of c-IAP, inhibits its activity by catalytically cleaving c-IAP. Another negative regulator, Smac/DIABLO, acts by enhancing the auto-ubiquitization activity of c-IAP.

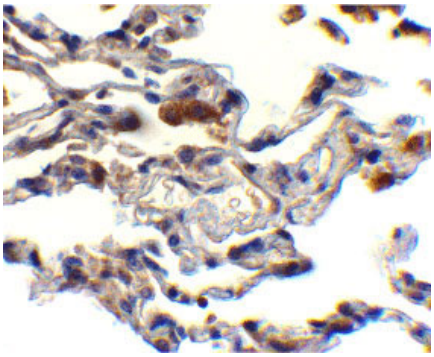
References

Schimmer AD. Inhibitor of apoptosis proteins: translating basic knowledge into clinical practice. Cancer Res. 2004; 64:7183-90.
Rothe M, Pan M-G, Henzel WJ, et al. The TNFR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins. Cell 1995; 83:1243-52.
Deveraux QL, Leo E, Stennicke HR, et al. IAPs block apoptotic events induced by caspase-8 and cytochrome c by direct inhibition of distinct caspases. EMBO J. 1998; 17:2215-23.
Li X, Yang Y, Ashwell JD. TNF-RII and c-IAP1 mediate ubiquitinization and degradation of TRAF 2. Nature 2002; 416:345-7.

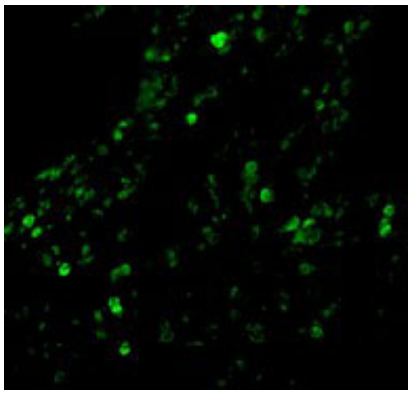
Images

Western blot analysis of c-IAP in human lung lysate with c-IAP antibody at 1 (lane A), 2 (lane B), and 4 (lane C) µg/mL, respectively.





Immunohistochemistry of cIAP in human lung cells with cIAP antibody at 10 µg/mL.



Immunofluorescence of cIAP in Human Lung cells with cIAP antibody at 20 µg/mL.