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XIAP Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5614

Product Information

Application	IF, IHC, WB
Primary Accession	P98170
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	56685
Isotype	IgG1,K
Antigen Source	HUMAN

Additional Information

Gene ID	331
Antigen Region	1-497
Other Names	E3 ubiquitin-protein ligase XIAP, 632-, Baculoviral IAP repeat-containing protein 4, IAP-like protein, ILP, hILP, Inhibitor of apoptosis protein 3, IAP-3, hIAP-3, hIAP3, X-linked inhibitor of apoptosis protein, X-linked IAP, XIAP, API3, BIRC4, IAP3
Dilution	IF~~1:25 IHC~~1:100~500 WB~~0.25
Target/Specificity	This XIAP antibody is generated from a mouse immunized with a recombinant protein human XIAP .
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	XIAP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	XIAP {ECO:0000303|PubMed:12121969, ECO:0000312|HGNC:HGNC:592}
Function	Multi-functional protein which regulates not only caspases and apoptosis, but also modulates inflammatory signaling and immunity, copper homeostasis, mitogenic kinase signaling, cell proliferation, as well as cell invasion and metastasis (PubMed:11257230, PubMed:11257231, PubMed:11447297, PubMed:12121969, PubMed:12620238, PubMed:17560374, PubMed:17967870, PubMed:19473982,

PubMed:20154138, PubMed:22103349, PubMed:9230442). Acts as a direct caspase inhibitor (PubMed:11257230, PubMed:11257231, PubMed:12620238). Directly bind to the active site pocket of CASP3 and CASP7 and obstructs substrate entry (PubMed:11257230, PubMed:11257231, PubMed:16352606, PubMed:16916640). Inactivates CASP9 by keeping it in a monomeric, inactive state (PubMed:12620238). Acts as an E3 ubiquitin-protein ligase regulating NF-kappa-B signaling and the target proteins for its E3 ubiquitin- protein ligase activity include: RIPK1, RIPK2, MAP3K2/MEKK2, DIABLO/SMAC, AIFM1, CCS, PTEN and BIRC5/survivin (PubMed:17560374, PubMed:17967870, PubMed:19473982, PubMed:20154138, PubMed:22103349, PubMed:22607974, PubMed:29452636, PubMed:30026309). Acts as an important regulator of innate immunity by mediating 'Lys-63'-linked polyubiquitination of RIPK2 downstream of NOD1 and NOD2, thereby transforming RIPK2 into a scaffolding protein for downstream effectors, ultimately leading to activation of the NF-kappa-B and MAP kinases signaling (PubMed:19667203, PubMed:22607974, PubMed:29452636, PubMed:30026309). 'Lys-63'-linked polyubiquitination of RIPK2 also promotes recruitment of the LUBAC complex to RIPK2 (PubMed:22607974, PubMed:29452636). Regulates the BMP signaling pathway and the SMAD and MAP3K7/TAK1 dependent pathways leading to NF-kappa-B and JNK activation (PubMed:17560374). Ubiquitination of CCS leads to enhancement of its chaperone activity toward its physiologic target, SOD1, rather than proteasomal degradation (PubMed:20154138). Ubiquitination of MAP3K2/MEKK2 and AIFM1 does not lead to proteasomal degradation (PubMed:17967870, PubMed:22103349). Plays a role in copper homeostasis by ubiquitinating COMMD1 and promoting its proteasomal degradation (PubMed:14685266). Can also function as E3 ubiquitin-protein ligase of the NEDD8 conjugation pathway, targeting effector caspases for neddylation and inactivation (PubMed:21145488). Ubiquitinates and therefore mediates the proteasomal degradation of BCL2 in response to apoptosis (PubMed:29020630). 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 (PubMed:22095281). Suppresses ripoptosome formation by ubiquitinating RIPK1 and CASP8 (PubMed:22095281). Acts as a positive regulator of Wnt signaling and ubiquitinates TLE1, TLE2, TLE3, TLE4 and AES (PubMed:22304967). Ubiquitination of TLE3 results in inhibition of its interaction with TCF7L2/TCF4 thereby allowing efficient recruitment and binding of the transcriptional coactivator beta-catenin to TCF7L2/TCF4 that is required to initiate a Wnt-specific transcriptional program (PubMed:22304967).

Cellular Location

Cytoplasm. Nucleus. Note=TLE3 promotes its nuclear localization.

Tissue Location

Expressed in colonic crypts (at protein level) (PubMed:30389919). Ubiquitous, except peripheral blood leukocytes (PubMed:8654366).

Background

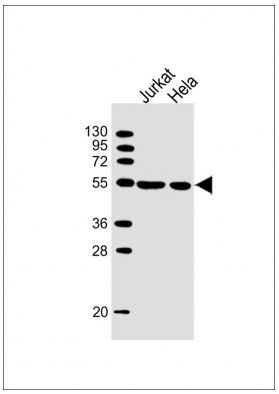
Multi-functional protein which regulates not only caspases and apoptosis, but also modulates inflammatory signaling and immunity, copper homeostasis, mitogenic kinase signaling, cell proliferation, as well as cell invasion and metastasis. Acts as a direct caspase inhibitor. Directly bind to the active site pocket of CASP3 and CASP7 and obstructs substrate entry. Inactivates CASP9 by keeping it in a monomeric, inactive state. Acts as an E3 ubiquitin-protein ligase regulating NF-kappa-B signaling and the target proteins for its E3 ubiquitin-protein ligase activity include: RIPK1, CASP3, CASP7, CASP8, CASP9, MAP3K2/MEKK2, DIABLO/SMAC, AIFM1, CCS and BIRC5/survivin. Ubiquitinion of CCS leads to enhancement of its chaperone activity toward its physiologic target, SOD1, rather than proteasomal degradation. Ubiquitinion of MAP3K2/MEKK2 and AIFM1 does not lead to proteasomal degradation. Plays a role in copper homeostasis by ubiquitinationg COMMD1 and promoting its proteasomal degradation. Can also function as E3

ubiquitin-protein ligase of the NEDD8 conjugation pathway, targeting effector caspases for neddylation and inactivation. Regulates the BMP signaling pathway and the SMAD and MAP3K7/TAK1 dependent pathways leading to NF-kappa-B and JNK activation. Acts as an important regulator of innate immune signaling via regulation of Nodlike receptors (NLRs). 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. Acts as a positive regulator of Wnt signaling and ubiquitinates TLE1, TLE2, TLE3, TLE4 and AES. Ubiquitination of TLE3 results in inhibition of its interaction with TCF7L2/TCF4 thereby allowing efficient recruitment and binding of the transcriptional coactivator beta- catenin to TCF7L2/TCF4 that is required to initiate a Wnt-specific transcriptional program.

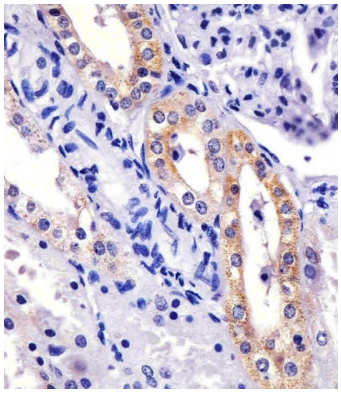
References

Duckett C.S.,et al.EMBO J. 15:2685-2694(1996).
Liston P.,et al.Nature 379:349-353(1996).
Ross M.T.,et al.Nature 434:325-337(2005).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Deveraux Q.L.,et al.Nature 388:300-304(1997).

Images

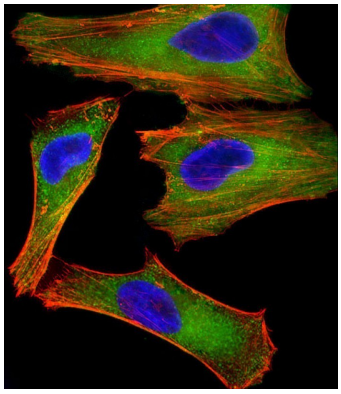


All lanes : Anti-XIAP Antibody at 1:2000 dilution Lane 1: Jurkat whole cell lysate Lane 2: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AW5612 staining XIAP in human kidney sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling Pdx1 with AW5612 at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution



(red). The nuclear counter stain is DAPI (blue).

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