

## Specification

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](http://www.uniprot.org/citations/11257230), [PubMed](#):[11257231](http://www.uniprot.org/citations/11257231), [PubMed](#):[11447297](http://www.uniprot.org/citations/11447297), [PubMed](#):[12121969](http://www.uniprot.org/citations/12121969),

[12620238](http://www.uniprot.org/citations/12620238), PubMed: [17560374](http://www.uniprot.org/citations/17560374), PubMed: [17967870](http://www.uniprot.org/citations/17967870), PubMed: [19473982](http://www.uniprot.org/citations/19473982), PubMed: [20154138](http://www.uniprot.org/citations/20154138), PubMed: [22103349](http://www.uniprot.org/citations/22103349), PubMed: [9230442](http://www.uniprot.org/citations/9230442)). Acts as a direct caspase inhibitor (PubMed: [11257230](http://www.uniprot.org/citations/11257230) target="\_blank">11257230, PubMed: [11257231](http://www.uniprot.org/citations/11257231) target="\_blank">11257231, PubMed: [12620238](http://www.uniprot.org/citations/12620238) target="\_blank">12620238). Directly bind to the active site pocket of CASP3 and CASP7 and obstructs substrate entry (PubMed: [11257230](http://www.uniprot.org/citations/11257230) target="\_blank">11257230, PubMed: [11257231](http://www.uniprot.org/citations/11257231) target="\_blank">11257231, PubMed: [16352606](http://www.uniprot.org/citations/16352606) target="\_blank">16352606, PubMed: [16916640](http://www.uniprot.org/citations/16916640) target="\_blank">16916640). Inactivates CASP9 by keeping it in a monomeric, inactive state (PubMed: [12620238](http://www.uniprot.org/citations/12620238) target="\_blank">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](http://www.uniprot.org/citations/17560374) target="\_blank">17560374, PubMed: [17967870](http://www.uniprot.org/citations/17967870) target="\_blank">17967870, PubMed: [19473982](http://www.uniprot.org/citations/19473982) target="\_blank">19473982, PubMed: [20154138](http://www.uniprot.org/citations/20154138) target="\_blank">20154138, PubMed: [22103349](http://www.uniprot.org/citations/22103349) target="\_blank">22103349, PubMed: [22607974](http://www.uniprot.org/citations/22607974) target="\_blank">22607974, PubMed: [29452636](http://www.uniprot.org/citations/29452636) target="\_blank">29452636, PubMed: [30026309](http://www.uniprot.org/citations/30026309) target="\_blank">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](http://www.uniprot.org/citations/19667203) target="\_blank">19667203, PubMed: [22607974](http://www.uniprot.org/citations/22607974) target="\_blank">22607974, PubMed: [29452636](http://www.uniprot.org/citations/29452636) target="\_blank">29452636, PubMed: [30026309](http://www.uniprot.org/citations/30026309) target="\_blank">30026309). 'Lys-63'-linked polyubiquitination of RIPK2 also promotes recruitment of the LUBAC complex to RIPK2 (PubMed: [22607974](http://www.uniprot.org/citations/22607974) target="\_blank">22607974, PubMed: [29452636](http://www.uniprot.org/citations/29452636) target="\_blank">29452636). Regulates the BMP signaling pathway and the SMAD and MAP3K7/TAK1 dependent pathways leading to NF-kappa-B and JNK activation (PubMed: [17560374](http://www.uniprot.org/citations/17560374) target="\_blank">17560374). Ubiquitination of CCS leads to enhancement of its chaperone activity toward its physiologic target, SOD1, rather than proteasomal degradation (PubMed: [20154138](http://www.uniprot.org/citations/20154138) target="\_blank">20154138). Ubiquitination of MAP3K2/MEKK2 and AIFM1 does not lead to proteasomal degradation (PubMed: [17967870](http://www.uniprot.org/citations/17967870) target="\_blank">17967870, PubMed: [22103349](http://www.uniprot.org/citations/22103349) target="\_blank">22103349). Plays a role in copper homeostasis by ubiquitinating COMMD1 and promoting its proteasomal degradation (PubMed: [14685266](http://www.uniprot.org/citations/14685266) target="\_blank">14685266). Can also function as E3 ubiquitin-protein ligase of the NEDD8 conjugation pathway, targeting effector caspases for neddylation and inactivation (PubMed: [21145488](http://www.uniprot.org/citations/21145488) target="\_blank">21145488). Ubiquitinates and therefore mediates the proteasomal degradation of BCL2 in response to apoptosis (PubMed: [29020630](http://www.uniprot.org/citations/29020630) target="\_blank">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](http://www.uniprot.org/citations/22095281) target="\_blank">22095281).

Suppresses ripoptosome formation by ubiquitinating RIPK1 and CASP8 (PubMed:<a href="http://www.uniprot.org/citations/22095281" target="\_blank">22095281</a>). Acts as a positive regulator of Wnt signaling and ubiquitinates TLE1, TLE2, TLE3, TLE4 and AES (PubMed:<a href="http://www.uniprot.org/citations/22304967" target="\_blank">22304967</a>). 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:<a href="http://www.uniprot.org/citations/22304967" target="\_blank">22304967</a>).

#### Cellular Location

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

#### Tissue Location

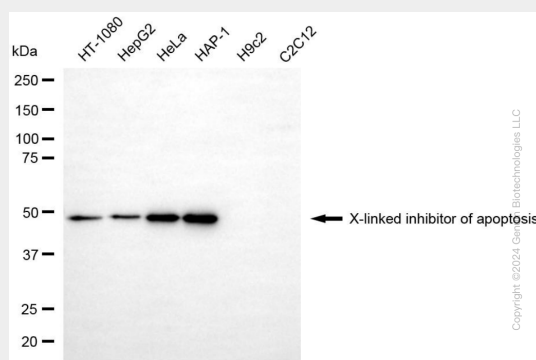
Expressed in colonic crypts (at protein level) (PubMed:30389919). Ubiquitous, except peripheral blood leukocytes (PubMed:8654366).

### KD-Validated Anti-XIAP Mouse Monoclonal Antibody - Protocols

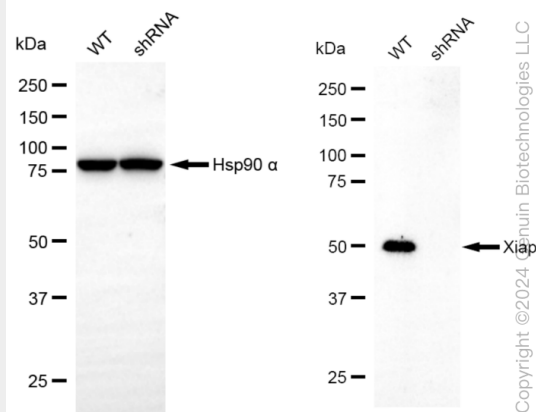
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### KD-Validated Anti-XIAP Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-X-linked inhibitor of apoptosis antibody (Cat#AGI2004). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-X-linked inhibitor of apoptosis antibody (Cat#AGI2004, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-X-linked inhibitor of apoptosis antibody (Cat#AGI2004). X-linked inhibitor of apoptosis expression in wild-type (WT) and X-linked inhibitor of apoptosis (XIAP) shRNA knockdown (KD) HT-1080 cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-X-linked inhibitor of apoptosis antibody (Cat#AGI2004, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.