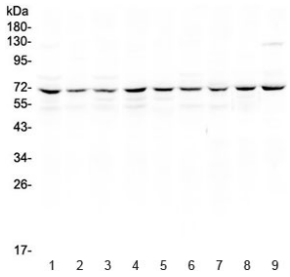
cIAP1 Antibody / BIRC2 (RQ4201)

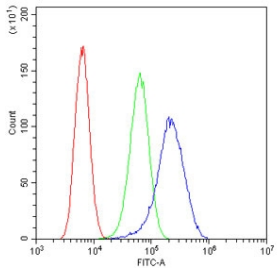
Catalog No.	Formulation	Size
RQ4201	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

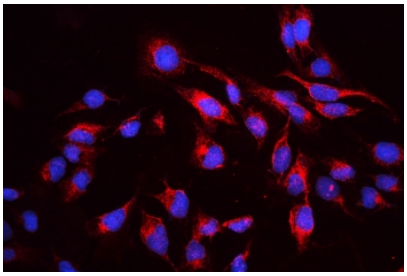
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q13490
Applications	Western Blot: 0.5-1ug/ml Flow: 1-3ug/million cells Immunofluorescence/Immunocytochemistry (FFPE): 2-5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This cIAP1 antibody is available for research use only.



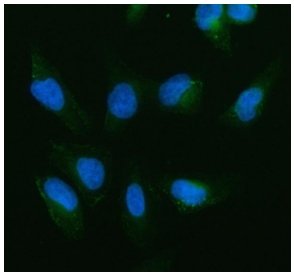
Western blot testing of human 1) HeLa, 2) Jurkat, 3) MCF7, 4) COLO320, 5) U-87 MG, 6) A549, 7) rat thymus, 8) mouse thymus and 9) mouse testis lysate with cIAP1 antibody at 0.5ug/ml. Predicted molecular weight ~70 kDa.



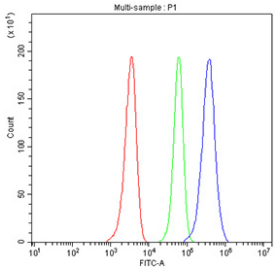
Flow cytometry testing of fixed and permeabilized human U-2 OS cells with cIAP1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= cIAP1 antibody.



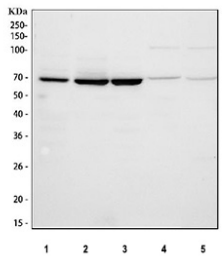
IF/ICC staining of FFPE human U-2 OS cells with cIAP1 antibody (red) at 2ug/ml and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



IF/ICC staining of FFPE human U-2 OS cells with cIAP1 antibody (green) at 5ug/ml and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Flow cytometry testing of fixed and permeabilized human HEL cells with cIAP1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= cIAP1 antibody.



Western blot testing of 1) human Jurkat, 2) human 293T, 3) human HepG2, 4) rat brain and 5) mouse brain tissue lysate with cIAP1 antibody at 0.5ug/ml. Predicted molecular weight ~70 kDa.

Description

cIAP1 antibody is an important reagent for studying apoptosis, immune signaling, and cancer biology. The encoded protein, BIRC2 (also known as cellular inhibitor of apoptosis protein 1, cIAP1), belongs to the inhibitor of apoptosis (IAP) family, which regulates cell death and survival pathways. cIAP1 contains baculoviral IAP repeat (BIR) domains that interact with caspases, modulating apoptosis, and a RING domain that confers E3 ubiquitin ligase activity. Through these functions, BIRC2 integrates apoptotic control with ubiquitin-mediated protein degradation, making it a central regulator of cellular fate.

cIAP1 is best known for its role in negatively regulating apoptosis by suppressing caspase activation. However, its

functions extend beyond apoptosis inhibition. BIRC2 is a critical signaling intermediate in the TNF receptor and NF-kB pathways, where it promotes cell survival, proliferation, and inflammatory responses. By ubiquitinating receptor-associated proteins such as RIP1, cIAP1 controls the balance between pro-survival and pro-death signaling downstream of TNF receptors.

Research has linked BIRC2 to a variety of diseases, particularly cancer. Overexpression of cIAP1 has been observed in multiple tumor types, including cervical, esophageal, and lung cancers, where it contributes to resistance against apoptosis and supports tumor progression. Inhibitors of IAP proteins, known as SMAC mimetics, are being investigated as cancer therapeutics to neutralize cIAP1 and restore apoptosis sensitivity in malignant cells. Beyond oncology, dysregulation of cIAP1 has also been implicated in immune-related disorders and chronic inflammation.

At the molecular level, BIRC2 interacts with signaling complexes to fine-tune immune and survival pathways. Its E3 ubiquitin ligase activity allows it to regulate protein turnover and signaling cascade intensity, while its BIR domains mediate interactions with caspases and other regulatory proteins. These combined activities highlight cIAP1 as a multifunctional protein with broad influence over cellular signaling networks.

The cIAP1 antibody is commonly used in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to measure expression levels, localization, and regulation of BIRC2. These applications are particularly valuable for cancer research, apoptosis studies, and investigations of immune signaling. For researchers focused on therapeutic development, cell death regulation, or tumor biology, the cIAP1 antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies that ensure accuracy and reproducibility in advanced molecular studies.

Application Notes

Optimal dilution of the cIAP1 antibody should be determined by the researcher.

Immunogen

A recombinant human protein corresponding to amino acids D320-T570 was used as the immunogen for the cIAP1 antibody.

Storage

After reconstitution, the cIAP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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