abcam

ab81353

Anti-XAF1 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: 76.92% Trehalose, 17.31% Sodium chloride, 3.85% Disodium hydrogenorthophosphate
Form	Liquid
Clonality	Polyclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Purification technique	Affinity purification Immunogen
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	0.1-0.5 µg/mL
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1-3 µg for 10^6 Cells
Notes	-

Target data

See full target information XAF1

Function

Seems to function as a negative regulator of members of the IAP (inhibitor of apoptosis protein) family. Inhibits anti-caspase activity of BIRC4. Induces cleavage and inactivation of BIRC4 independent of caspase activation. Mediates TNF-induced apoptosis and is involved in apoptosis in trophoblast cells. May inhibit BIRC4 indirectly by activating the mitochondrial apoptosis pathway. After translocation to mitochondria, promotes translocation of BAX to mitochondria and cytochrome c release from mitochondria. Seems to promote the redistribution of BIRC4 from the cytoplasm to the nucleus, probably independent of BIRC4 inactivation which seems to occur in the cytoplasm. The BIRC4-XAF1 complex mediates down-regulation of BIRC5/survivin; the process requires the E3 ligase activity of BIRC4. Seems to be involved in cellular sensitivity to the proapoptotic actions of TRAIL. May be a tumor suppressor by mediating apoptosis resistance of cancer cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The XAF1 protein also known as XIAP associated factor 1 plays a role in apoptosis regulation. It weighs approximately 34 kDa and exists in multiple isoforms. The protein is broadly expressed in various tissues including the liver pancreas and heart. XAF1 interacts directly with XIAP (X-linked inhibitor of apoptosis) counteracting its anti-apoptotic effects. XAF1's activity centers on promoting apoptosis by binding to XIAP and inhibiting its function.
Biological function summary	XAF1 functions in promoting cell death through apoptosis. It forms part of the apoptosome a large protein complex important for the intrinsic pathway of apoptosis. XAF1 exerts its influence by destabilizing XIAP's interaction with caspases releasing them to activate. These interactions trigger a cascade that leads to programmed cell death vital for maintaining cellular balance and response to stress.
Pathways	XAF1 plays significant role in the apoptosis and cell survival pathways. Within the intrinsic pathway XAF1 associates with Bax and caspase-3 directly impacting mitochondrial membrane permeability and caspase activation. These pathways ensure proper cell turnover and reaction to cellular damage often involving Bcl-2 family proteins and Smac/DIABLO protein for regulation as well.
Associated diseases and disorders	XAF1's role in cancer and neurological disorders is noteworthy. In several cancer types such as colon and gastric cancers decreased XAF1 expression associates with increased cancer cell survival due to impaired apoptosis. Meanwhile abnormal regulation of XAF1 links to neurodegenerative diseases involving proteins like XIAP and caspase-9 where inhibited apoptosis can lead to accumulation of damaged cells contributing to disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

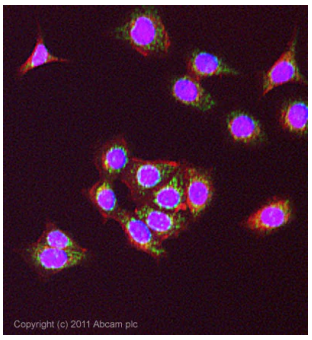
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

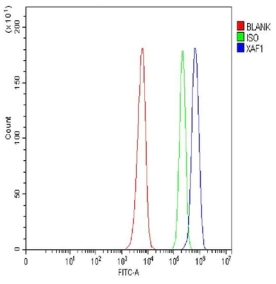
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-XAF1 antibody (ab81353)

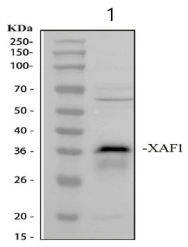
XAF1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-XAF1 antibody

ICC/IF image of ab81353 stained MCF7 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab81353, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h.Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry (Intracellular) - Anti-XAF1 antibody (ab81353)

Overlay histogram showing SiHa cells stained with ab81353 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with ab81353 (1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot - Anti-XAF1 antibody (ab81353)

Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours.
All lanes:
Western blot - Anti-XAF1 antibody (ab81353) at 0.5 µg/mL

All lanes:
Human Jurkat whole cell lysates at 30 µg

Secondary

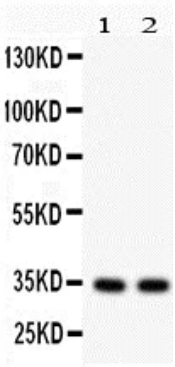
All lanes:
Goat anti-rabbit IgG-HRP secondary antibody at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 35 kDa

Observed band size: 35 kDa



Western blot - Anti-XAF1 antibody (ab81353)

All lanes:
Western blot - Anti-XAF1 antibody (ab81353) at 0.5 µg/mL

All lanes:
HEPG2 whole cell lysate at 40 µg

Predicted band size: 35 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.