abcam

ab314042

Anti-COPS3/CSN3 antibody [3F9]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.88% Sodium chloride
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human COPS3. Database link Q9UNS2
Clone number	3F9
Purification technique	Affinity purification
Concentration	0.11 - 0.29 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Target data

See full target information COPS3

Function Component of the COP9 signalosome complex (CSN), a complex involved in various cellular and developmental processes. The CSN complex is an essential regulator of the ubiquitin (Ubl) conjugation pathway by mediating the deneddylation of the cullin subunits of SCF-type E3 ligase complexes, leading to decrease the Ubl ligase activity of SCF-type complexes such as SCF, CSA or DDB2. The complex is also involved in phosphorylation of p53/TP53, c-jun/JUN, IkappaBalpha/NFKBIA, ITPK1 and IRF8/ICSBP, possibly via its association with CK2 and PKD kinases. CSN-dependent phosphorylation of TP53 and JUN promotes and protects degradation by the Ubl system, respectively.

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
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	COPS3 also known as CSN3 or COP9 forms a component of the COP9 signalosome complex. It weighs around 53 kDa. COPS3 is mainly expressed in the cytoplasm of cells in various tissues including the brain heart and skeletal muscle. As part of the signalosome COPS3 plays a role in cellular and molecular processes by influencing protein levels through deneddylation.
Biological function summary	The COPS3/CSN3 protein functions as part of the COP9 signalosome complex which acts in regulating the ubiquitin-proteasome pathway. This complex is involved in mediating the stability and degradation of key regulatory proteins by removing NEDD8 from cullin-RING ligases. By modulating these ligases COPS3 affects protein turnover and signaling pathways essential for cell cycle control and DNA damage response.
Pathways	COPS3/CSN3 takes part in the ubiquitin-proteasome pathway and the DNA damage response pathway. By regulating cullin-RING E3 ubiquitin ligases it influences the degradation of proteins involved in these pathways like p27 and CDT1. Interacting with proteins such as CUL1 and CUL3 COPS3 assists in maintaining cellular homeostasis by ensuring timely protein degradation.

Associated diseases and disorders	Defects or dysregulation of COPS3 have links to cancer and neurodegenerative diseases. Its role in cancer involves connection to known proteins like p27 where altered protein turnover can lead to unchecked cell proliferation. In neurodegenerative diseases the connection lies with the UPS (ubiquitin-proteasome system) dysfunction affecting protein aggregation processes seen in disorders like Parkinson's disease.

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

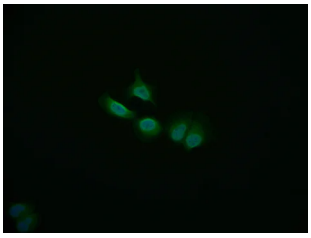
We do not recommend this combination. It is not covered by our product promise.

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.

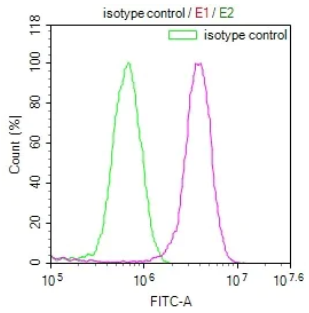
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-COPS3/CSN3 antibody [3F9] (ab314042)

COPS3/CSN3 Immunocytochemistry/ Immunofluorescence staining of A549 cells using rabbit Anti-COPS3/CSN3 antibody

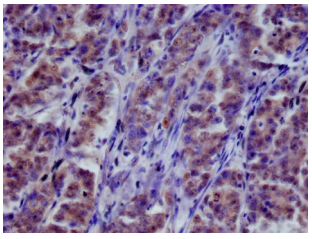
Immunofluorescence staining of A549 (Human lung carcinoma cell line) cells with ab314042 at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor® 535-conjugated Goat Anti-Rabbit IgG(H+L).



Flow Cytometry (Intracellular) - Anti-COPS3/CSN3 antibody [3F9] (ab314042)

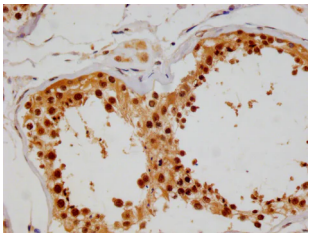
COPS3/CSN3 Flow Cytometry (Intracellular) staining of MCF7 cells using rabbit Anti-COPS3/CSN3 antibody

Overlay Peak curve showing MCF7 (Human breast adenocarcinoma cell line) cells stained with ab314042 (pink line) at 1:100. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1x1E06 cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1ug/1x10E6 cells) used under the same conditions. Acquisition of >10,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COPS3/CSN3 antibody [3F9] (ab314042)

Immunohistochemical analysis of ab314042 diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COPS3/CSN3 antibody [3F9] (ab314042)

Immunohistochemical analysis of ab314042 diluted at 1:100 and staining in paraffin-embedded human testis tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.

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