abcam

ab251085

Anti-CC2D1A antibody [EPR18421] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR18421

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CC2D1A

Function	Transcription factor that binds specifically to the DRE (dual repressor element) and represses HTR1A gene transcription in neuronal cells. The combination of calcium and ATP specifically inactivates the binding with FRE. May play a role in the altered regulation of HTR1A associated with anxiety and major depression. Mediates HDAC-independent repression of HTR1A promoter in neuronal cell. Performs essential function in controlling functional maturation of synapses (By similarity). Plays distinct roles depending on its localization. When cytoplasmic, acts as a scaffold protein in the PI3K/PDK1/AKT pathway. Repressor of HTR1A when nuclear. In the centrosome, regulates spindle pole localization of the cohesin subunit SCC1/RAD21, thereby mediating centriole cohesion during mitosis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251085 is the carrier-free version of ab191472.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	CC2D1A also known as Coiled-Coil and C2 Domain Containing 1A is a protein of approximately 100 kDa. This protein is widely expressed with significant presence in the brain indicating its potential role in neural functions. It possesses domains

	that enable interactions with other proteins and membranes suggesting a multifunctional mechanical role in cellular processes.
Biological function summary	CC2D1A participates in regulating signal transduction and intracellular communication. It becomes part of a larger signaling complex involved in essential cellular processes including proliferation and migration. In neural cells it influences synaptic signaling pathways impacting learning and memory formation suggesting its significance in cognitive functions.
Pathways	CC2D1A participates in the NF-kB and AKT/mTOR signaling pathways which are vital for regulating cell survival and growth. Through these pathways CC2D1A interacts with proteins such as AKT1 and IKK modulating cellular responses to stress and growth factors. Its role in these pathways places it at an important intersection of survival and developmental signaling.
Associated diseases and disorders	CC2D1A is linked to mental health conditions including autism spectrum disorders (ASD) and intellectual disabilities. Mutations in CC2D1A disrupt its function in neural pathways which may contribute to the development of these disorders. Additionally it interacts with protein DISC1 which has also been implicated in psychiatric disorders highlighting the complex network of interactions in neurodevelopmental and psychiatric disease pathways.

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

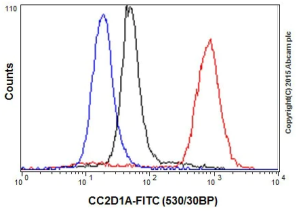
We do not recommend this combination. It is not covered by our product promise.

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.

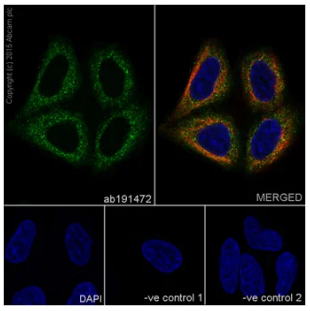
5 product images



Flow Cytometry (Intracellular) - Anti-CC2D1A antibody [EPR18421] - BSA and Azide free (ab251085)

CC2D1A Flow Cytometry (Intracellular) staining using rabbit Anti-CC2D1A antibody

This data was developed using ab191472, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling CC2D1A with ab191472 at 1/250 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and a unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-CC2D1A antibody [EPR18421] - BSA and Azide free (ab251085)

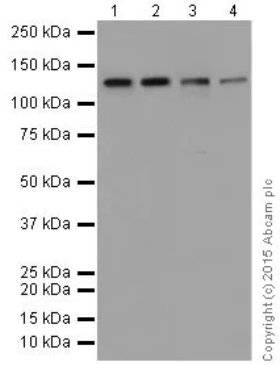
CC2D1A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CC2D1A antibody

This data was developed using ab191472, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling CC2D1A with ab191472 at 1/150 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasm staining on HeLa cell line.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:
1. ab191472 at 1/150 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
2. ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-CC2D1A antibody [EPR18421] - BSA and Azide free (ab251085)

CC2D1A Western blot staining using rabbit Anti-CC2D1A antibody

This data was developed using ab191472, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CC2D1A antibody [EPR18421] (ab191472) at 1/20000 dilution

Lane 1:

Hela (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
HEK-293 (Human epithelial cells from embryonic kidney) whole cell lysate at 20 µg

Lane 3:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

Lane 4:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

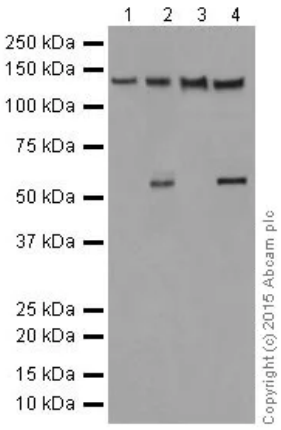
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/1000 dilution

Predicted band size: 104 kDa

Observed band size: 130 kDa

Exposure time: 5s



Western blot - Anti-CC2D1A antibody [EPR18421] - BSA and Azide free (ab251085)

CC2D1A Western blot staining using rabbit Anti-CC2D1A antibody

This data was developed using ab191472, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

The band at 67KD is an isoform of CC2D1A.

Rogaeva A and Albert PR. Eur J Neurosci. 2007; 26(4):965-974.

All lanes:
Western blot - Anti-CC2D1A antibody [EPR18421] (ab191472) at 1/5000 dilution

Lane 1:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 3:
PC12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 4:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

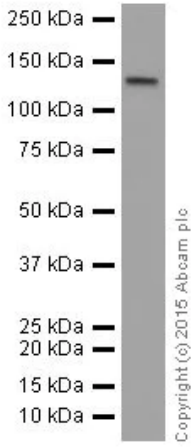
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/1000 dilution

Predicted band size: 104 kDa

Observed band size: 130 kDa, 67 kDa

Exposure time: 5s



Western blot - Anti-CC2D1A antibody [EPR18421] - BSA and Azide free (ab251085)

CC2D1A Western blot staining of Mouse brain tissue lysate using rabbit Anti-CC2D1A antibody

This data was developed using ab191472, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CC2D1A antibody [EPR18421] (ab191472) at 1/20000 dilution

All lanes:
Mouse brain tissue lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/1000 dilution

Predicted band size: 104 kDa

Observed band size: 130 kDa

Exposure time: 10s

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