abcam

ab276059

Anti-CPLX2 antibody [021] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human CPLX2 aa 1 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q6PUV4
Carrier free	Yes
Clone number	021
Purification technique	Affinity purification Protein A

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/20 - 1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/25 - 1/100
Notes	-

Target data

See full target information CPLX2

Function	Negatively regulates the formation of synaptic vesicle clustering at active zone to the presynaptic membrane in postmitotic neurons. Positively regulates a late step in exocytosis of various cytoplasmic vesicles, such as synaptic vesicles and other secretory vesicles. Also involved in mast cell exocytosis (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

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

Activity summary	CPLX2 also known as Complexin-2 is a synaptic protein involved in neurotransmitter release mechanism. It has a molecular mass of approximately 15 kDa. CPLX2 is highly expressed in the brain and is particularly abundant in synaptic vesicles of neuronal cells. It interacts with SNARE proteins which play a significant role in the vesicle fusion process. CPLX2 acts as a regulator of neurotransmitter release influencing the balance between excitation and inhibition in synaptic transmission.
Biological function summary	CPLX2 functions by interacting with other synaptic proteins to facilitate neurotransmitter release at synapses. It forms a complex with SNARE proteins which are essential for synaptic vesicle fusion with the presynaptic membrane. This interaction ensures precise timing of neurotransmitter release which is critical for neural communication. CPLX2's role in synaptic function highlights its importance in maintaining the efficiency of synaptic signaling.

Pathways	The role of CPLX2 is integral in synaptic vesicle cycle and neurotransmission pathways. It closely interacts with SNARE proteins such as Syntaxin and Synaptobrevin in facilitating vesicle docking and fusion. These interactions are essential for the neurotransmitter release process which is part of the larger synaptic signaling pathway. CPLX2 modulates synaptic plasticity and exocytosis linking it to the regulation of synaptic strength and neural network activity.
Associated diseases and disorders	Alterations in CPLX2 expression or function have been associated with neurological conditions like epilepsy and schizophrenia. Abnormal CPLX2 activity may lead to disrupted synaptic signaling contributing to the pathophysiology of these disorders. Additionally its connection with SNARE proteins such as SNAP-25 serves as a potential point of intersection where synaptic dysfunction can contribute to disease development. Understanding CPLX2's influence on neurotransmission provides insights into therapeutic targets for synaptic disorders.

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

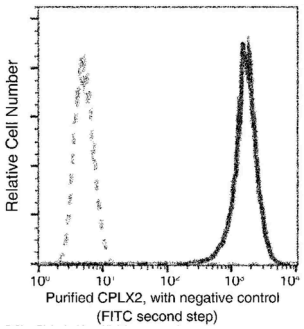
We do not recommend this combination. It is not covered by our product promise.

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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:
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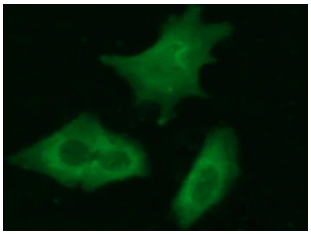
2 product images



Flow Cytometry (Intracellular) - Anti-CPLX2 antibody [021] - BSA and Azide free (ab276059)

CPLX2 Flow Cytometry (Intracellular) staining using rabbit Anti-CPLX2 antibody

Intracellular flow cytometric analysis of SH-SY5Y (human neuroblastoma cell line from bone marrow) cells labeling CPLX2 with ab276059, followed byFITC-conjugated secondary antibody (black line) compared with a negative control (grey line).The cells were treated according to manufacturer's manual. The Fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.



Immunocytochemistry - Anti-CPLX2 antibody [021] - BSA and Azide free (ab276059)

CPLX2 Immunocytochemistry staining using rabbit Anti-CPLX2 antibody

Immunofluorescent analysis of 4% PFA fixed, 0.1% Triton X-100 in PBS permeabilzed SH-SY5Y (human neuroblastoma cell line from bone marrow) cells labeling CPLX2 with ab276059 at 1/60 dilution, 4°C overnight, followed by Goat Anti-rabbit IgG Alexa Fluor 488-conjugated secondary antibody (green). Cells were blocked with 10% serum prior incubation.

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