abcam

Product datasheet

Anti-Dynamin 2 antibody ab3457

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Overview

Product name	Anti-Dynamin 2 antibody
Description	Rabbit polyclonal to Dynamin 2
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human, Non human primates **Predicted to work with:** Cow
Immunogen	Synthetic peptide corresponding to Human Dynamin 2 aa 760-779. Sequence: SPTPQRRPVSSIHPPGRPPA (Peptide available as **ab4985**) Run BLAST with Run BLAST with
Positive control	WB: SH-SY5Y, PC-12, Neuro 2a, SK-N-AS, U-87 MG, rat brain tissue; ICC/IF: SH-SY5Y, HeLa; IHC: human lung tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab3457 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration.
ICC/IF	★★★★★ (4)	Use at an assay dependent concentration.
IHC-P		Use a concentration of 1 µg/ml.

Target

Function Microtubule-associated force-producing protein involved in producing microtubule bundles and able to bind and hydrolyze GTP. Most probably involved in vesicular trafficking processes, in particular endocytosis.

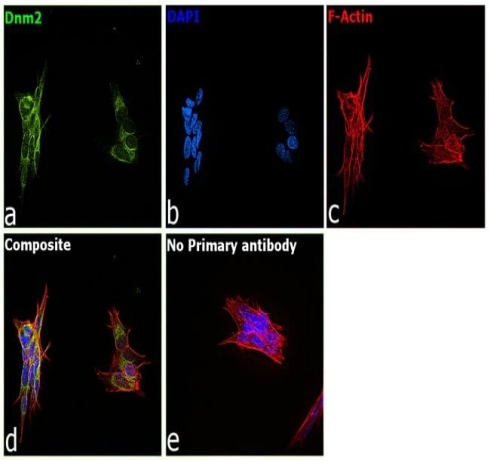
Tissue specificity Ubiquitously expressed.

Involvement in disease Defects in DNM2 are a cause of centronuclear myopathy autosomal dominant (ADCNM) [MIM:160150]; also known as autosomal dominant myotubular myopathy. Centronuclear myopathies (CNMs) are congenital muscle disorders characterized by progressive muscular weakness and wasting involving mainly limb girdle, trunk, and neck muscles. It may also affect distal muscles. Weakness may be present during childhood or adolescence or may not become evident until the third decade of life. Ptosis is a frequent clinical feature. CNMs comprise a wide spectrum of phenotypes, ranging from severe neonatal to mild late-onset familial forms. The most prominent histopathologic features include high frequency of centrally located nuclei in muscle fibers not secondary to regeneration, radial arrangement of sarcoplasmic strands around the central nuclei, and predominance and hypotrophy of type 1 fibers.
Defects in DNM2 are the cause of Charcot-Marie-Tooth disease dominant intermediate type B (CMTDIB) [MIM:606482]. Charcot-Marie-Tooth disease (CMT) is a clinically and genetically heterogeneous disorder of the peripheral nervous system, characterized by progressive weakness and atrophy, initially of the peroneal muscles and later of the distal muscles of the arms. CMTDIB is a form of Charcot-Marie-Tooth disease characterized by clinical and pathologic features intermediate between demyelinating and axonal peripheral neuropathies, and motor median nerve conduction velocities ranging from 25 to 45 m/sec.

Sequence similarities Belongs to the dynamin family.
Contains 1 GED domain.
Contains 1 PH domain.

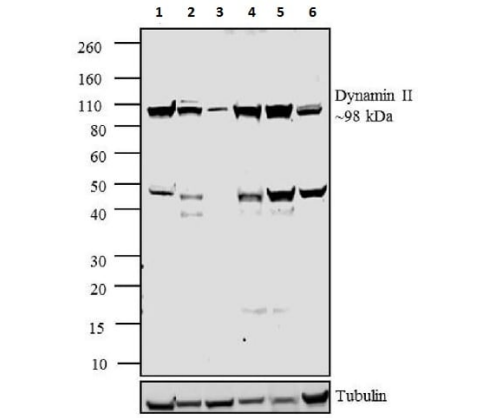
Cellular localization Cytoplasm. Cytoplasm > cytoskeleton. Cell junction > synapse > postsynaptic cell membrane > postsynaptic density. Cell junction > synapse. Microtubule-associated. Also found in the postsynaptic density of neuronal cells.

Images



Immunocytochemistry/ Immunofluorescence - Anti-Dynamin 2 antibody (ab3457)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized SH-SY5Y cells labeling Dynamin 2 with ab3457 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) secondary antibody at 1/2000 dilution (green). The nuclear counterstain is DAPI (blue), and F-actin is stained with Rhodamine Phalloidin iat 1/300 dilution (red). Negative control was cells without primary antibody present.

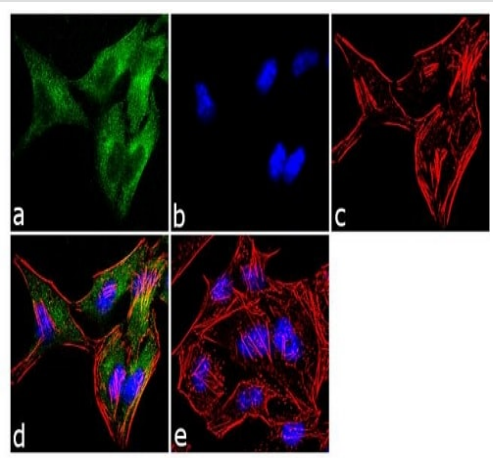


Western blot - Anti-Dynamin 2 antibody (ab3457)

All lanes : Anti-Dynamin 2 antibody (ab3457)

Lane 1 : SH-SY5Y whole cell lysate
Lane 2 : PC-12
Lane 3 : Neuro-2a
Lane 4 : SK-N-AS
Lane 5 : U- 87 MG
Lane 6 : Rat Brain

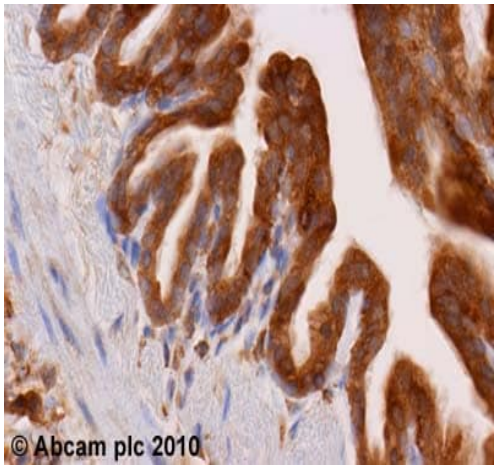
Secondary
All lanes : Goat anti-Rabbit IgG (H+L) HRP conjugated



Immunocytochemistry/ Immunofluorescence - Anti-Dynamin 2 antibody (ab3457)

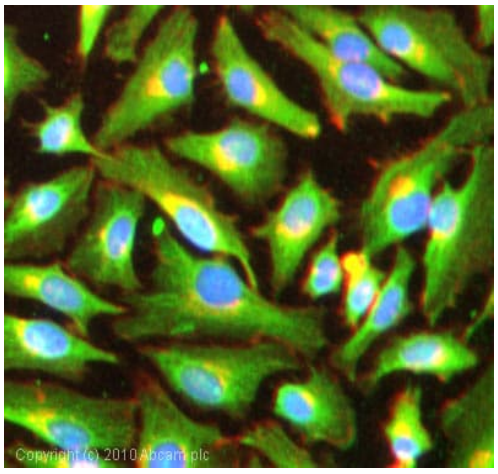
Immunofluorescent analysis of 4% paraformaldehyde-fixed,0.1% Triton X-100 permeabilized HeLa cells labeling Dynamin 2 with ab3457 at 2 ug/ml followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) secondary antibody at 1/2000 dilution (green).

The nuclear counterstain is DAPI.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dynamin 2 antibody (ab3457)

ab3457 (1µg/ml) staining Dynamin 2 in human lung using an automated system (DAKO Autostainer Plus).
Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



Immunocytochemistry/ Immunofluorescence - Anti-Dynamin 2 antibody (ab3457)

ICC/IF image of ab3457 stained HeLa cells. The cells were 100% methanol fixed (5 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 (ab3457, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 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.

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