abcam

Product datasheet

Anti-AFG3L2 antibody ab154990

3 Images

Overview

Product name	Anti-AFG3L2 antibody
Description	Rabbit polyclonal to AFG3L2
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat **Predicted to work with:** Sheep, Rabbit, Cow, Cat, Chimpanzee, Macaque monkey, Gorilla, Orangutan
Immunogen	Synthetic peptide corresponding to Mouse AFG3L2 aa 50-150 conjugated to Keyhole Limpet Haemocyanin (KLH). Database link: Q8JZQ2
Positive control	This antibody gave a positive signal in the following tissue lysates: Mouse Brain; Rat Brain; Mouse Hippocampus; Rat Hippocampus; Mouse Cerebellum. This antibody gave a positive result in IHC in the following FFPE tissue: Normal mouse brain. This antibody gave a positive result when used in the following methanol fixed cell lines: PC12

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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab154990** in the following tested applications.

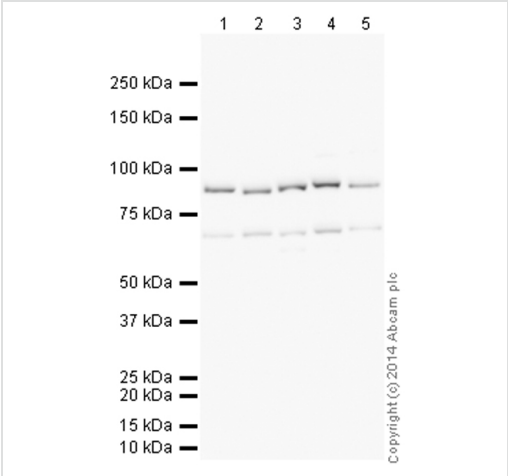
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 5 µg/ml.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 89 kDa (predicted molecular weight: 89 kDa). Abcam recommends using milk as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	ATP-dependent protease which is essential for axonal development.
Tissue specificity	Ubiquitous. Highly expressed in the cerebellar Purkinje cells.
Involvement in disease	Defects in AFG3L2 are the cause of spinocerebellar ataxia type 28 (SCA28) [MIM:610246]. It is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCA28 is an autosomal dominant cerebellar ataxia (ADCA) with a slow progressive course and no evidence of sensory involvement or cognitive impairment. Defects in AFG3L2 are the cause of spastic ataxia autosomal recessive type 5 (SPAX5) [MIM:614487]. A neurodegenerative disorder characterized by early onset spasticity, peripheral neuropathy, ptosis, oculomotor apraxia, dystonia, cerebellar atrophy, and progressive myoclonic epilepsy.
Sequence similarities	In the N-terminal section; belongs to the AAA ATPase family. In the C-terminal section; belongs to the peptidase M41 family.
Cellular localization	Mitochondrion membrane.

Images



Western blot - Anti-AFG3L2 antibody (ab154990)

All lanes : Anti-AFG3L2 antibody (ab154990) at 1 µg/ml (Milk blocking 3%)

Lane 1 : Brain (Mouse) Tissue Lysate
Lane 2 : Brain (Rat) Tissue Lysate
Lane 3 : Cerebellum Rat Tissue Lysate
Lane 4 : Mouse Hippocampus Tissue Lysate
Lane 5 : Rat Hippocampus Tissue Lysate

Lysates/proteins at 25 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

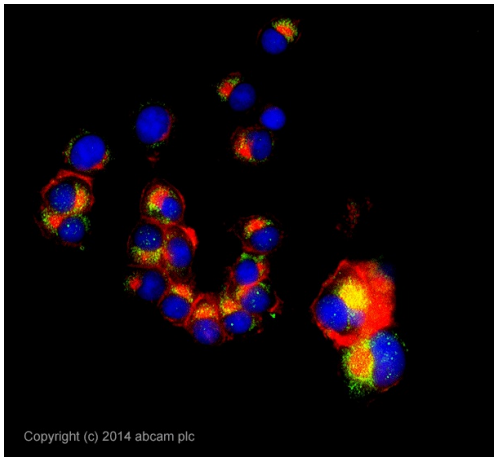
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 89 kDa
Observed band size: 89 kDa
Additional bands at: 68 kDa (possible non-specific binding)

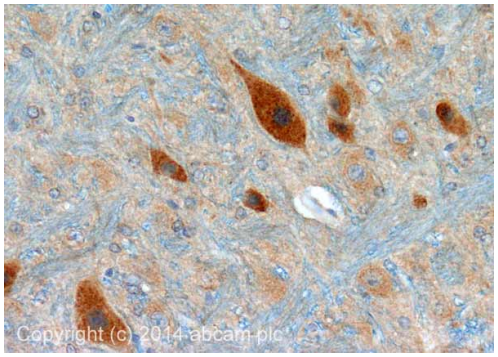
Exposure time: 2 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% Milk before being incubated with ab154990 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution ab133406.



Immunocytochemistry/ Immunofluorescence - Anti-AFG3L2 antibody (ab154990)

ICC/IF image of ab154990 stained PC12 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 ab154990 at 5µg/ml overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti- rabbit (ab150081) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AFG3L2 antibody (ab154990)

IHC image of AFG3L2 staining in Normal mouse brain formalin fixed paraffin embedded tissue section*, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab154990, 5µg/ml, for 15 mins at room temperature. A Goat anti-Rabbit biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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