abcam

Product datasheet

Anti-Acetylcholinesterase antibody [HR2] ab2803

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Overview

Product name	Anti-Acetylcholinesterase antibody [HR2]
Description	Mouse monoclonal [HR2] to Acetylcholinesterase
Host species	Mouse
Specificity	This antibody does not detect butyrylcholinesterase (BChE).
Tested applications	**Suitable for:** ELISA, IHC-Fr, IP, Flow Cyt, IHC-P, ICC/IF **Unsuitable for:** WB
Species reactivity	**Reacts with:** Mouse, Rabbit, Guinea pig, Cow, Cat, Human, Macaque monkey **Predicted to work with:** Non human primates **Does not react with:** Rat, Amphibian
Immunogen	Full length protein corresponding to Human Acetylcholinesterase. Purified Human cerebellar acetylcholinesterase.

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 Constituent: PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	HR2
Isotype	IgG2b

Applications

Our Abpromise guarantee covers the use of **ab2803** 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
ELISA		Use at an assay dependent concentration.
IHC-Fr		1/50. Immunohistochemical staining of AChE in human brain samples results in staining of nerve fibers and terminals.
IP		Use at an assay dependent concentration.
Flow Cyt		Use 1µg for 10^6 cells. ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
IHC-P		Use at an assay dependent concentration.
ICC/IF		1/100 - 1/1000.

Application notes Is unsuitable for WB.

Target

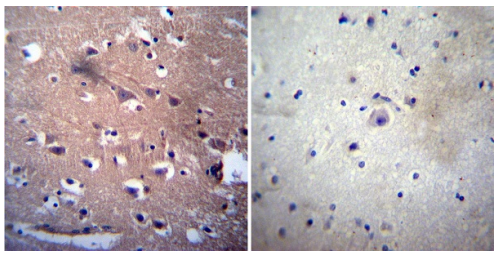
Function Terminates signal transduction at the neuromuscular junction by rapid hydrolysis of the acetylcholine released into the synaptic cleft. Role in neuronal apoptosis.

Tissue specificity Isoform H is highly expressed in erythrocytes.

Sequence similarities Belongs to the type-B carboxylesterase/lipase family.

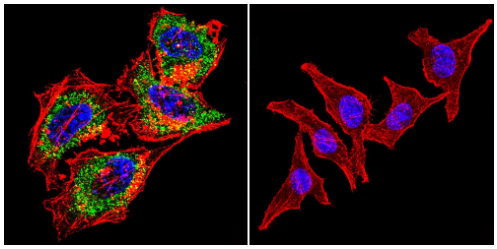
Cellular localization Cell membrane; Cell junction > synapse. Secreted. Cell membrane and Nucleus. Only observed in apoptotic nuclei.

Images



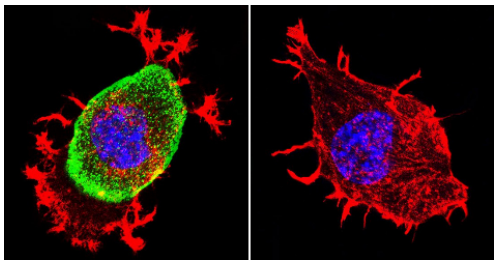
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized human Brain tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:200 with a mouse monoclonal antibody recognizing Acetylcholinesterase (ab2803) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



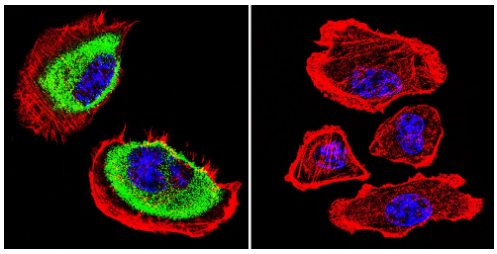
Immunocytochemistry/ Immunofluorescence - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

Immunocytochemistry/Immunofluorescence analysis of Acetylcholinesterase shows staining in HeLa cells. Acetylcholinesterase staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were incubated without (control) or with ab2803 (1:200) overnight at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



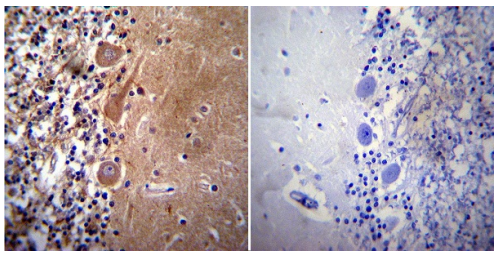
Immunocytochemistry/ Immunofluorescence - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

Immunocytochemistry/Immunofluorescence analysis of Acetylcholinesterase shows staining in Neuro-2a cells. Acetylcholinesterase staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were incubated without (control) or with ab2803 (1:200) overnight at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

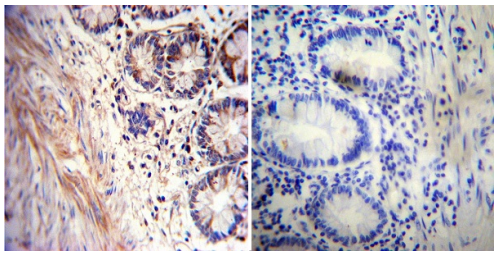
Immunocytochemistry/Immunofluorescence analysis of Acetylcholinesterase shows staining in U251 cells. Acetylcholinesterase staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were incubated without (control) or with ab2803 (1:200) overnight at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

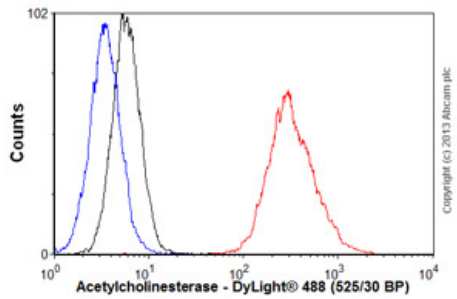
Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized human Cerebellum tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:50 with a mouse monoclonal antibody recognizing Acetylcholinesterase (ab2803) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-

HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized human Rectum tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:20 with a mouse monoclonal antibody recognizing Acetylcholinesterase (ab2803) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Flow Cytometry - Anti-Acetylcholinesterase antibody [HR2] (ab2803)

Overlay histogram showing HeLa cells stained with ab2803 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2803, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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