abcam

Product datasheet

Anti-GFAP antibody ab4674

★★★★★ 61 Abreviews 522 References 画像数 9

製品の概要

製品名	Anti-GFAP antibody
製品の詳細	Chicken polyclonal to GFAP
由来種	Chicken
アプリケーション	**適用あり:** IHC (PFA fixed), IHC-FrFl, ICC, IHC-P, WB
種交差性	**交差種:** Mouse, Rat **交差が予測される動物種:** Mammals
免疫原	Recombinant full length protein corresponding to Human GFAP. Isotype 1 expressed in and purified from E. coli. Database link: **P14136**
ポジティブ・コントロール	IHC-P: human cerebellum, CA1 hippocampal region, mouse normal brain and normal rat hippocampus tissue sections. IHC (PFA): Rat brain tissue. IHC (FF): Mouse hippocampus tissue. ICC/IF: Primary hippocampal rat neurons/glia and primary mouse neurons/glia cells. WB: Rat and mouse whole brain lysate.
特記事項	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

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C. Do Not Freeze.
バッファー	Preservative: 0.03% Sodium azide
精製度	IgY fraction
特記事項（精製）	Concentrated IgY fraction of egg yolks.
ポリ/モノ	ポリクローナル
アイソタイプ	IgY

アプリケーション

The Abpromise guarantee Abpromise保証は、次のテスト済みアプリケーションにおけるab4674の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
IHC (PFA fixed)		Use at an assay dependent concentration.
IHC-FrFl	★★★★★ (2)	1/1000 - 1/5000. Try this antibody at about between about 1:1,000 using fluorescent secondary antibodies or 1:5,000 using peroxidase or other enzyme linked methods.
ICC		1/500 - 1/1000.
IHC-P	★★★★★ (15)	1/200 - 1/20000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB	★★★★★ (4)	1/1000 - 1/5000. Predicted molecular weight: 50 kDa. Expect to see a band at 55kDa and another at about 48kDa, apparently a breakdown product of the 55kDa band.

ターゲット情報

機能 GFAP, a class-III intermediate filament, is a cell-specific marker that, during the development of the central nervous system, distinguishes astrocytes from other glial cells.

組織特異性 Expressed in cells lacking fibronectin.

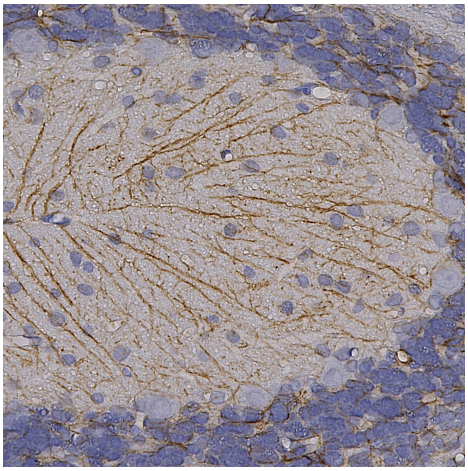
関連疾患 Defects in GFAP are a cause of Alexander disease (ALEXD) [MIM:203450]. Alexander disease is a rare disorder of the central nervous system. It is a progressive leukoencephalopathy whose hallmark is the widespread accumulation of Rosenthal fibers which are cytoplasmic inclusions in astrocytes. The most common form affects infants and young children, and is characterized by progressive failure of central myelination, usually leading to death usually within the first decade. Infants with Alexander disease develop a leukoencephalopathy with macrocephaly, seizures, and psychomotor retardation. Patients with juvenile or adult forms typically experience ataxia, bulbar signs and spasticity, and a more slowly progressive course.

配列類似性 Belongs to the intermediate filament family.

翻訳後修飾 Phosphorylated by PKN1.

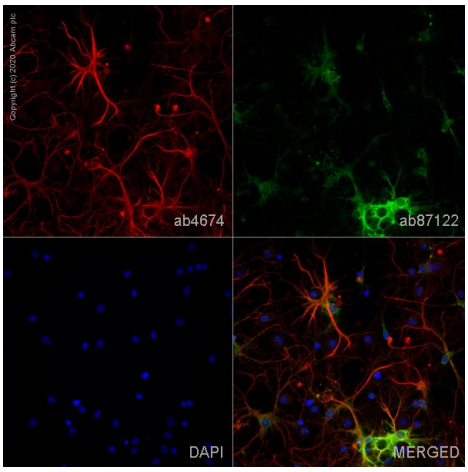
細胞内局在 Cytoplasm. Associated with intermediate filaments.

画像



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody (ab4674)

Chromogenic Immunostaining of a formalin fixed paraffin embedded human cerebellum section with chicken pAb to GFAP, dilution 1/20000, detected in DAB (brown) following the ABC method. Hematoxylin (blue) was used as the counterstain. ab4674 detects the core of processes of astrocytes and Bergman glia within the granular and molecular layers. Mouse select image for larger view.

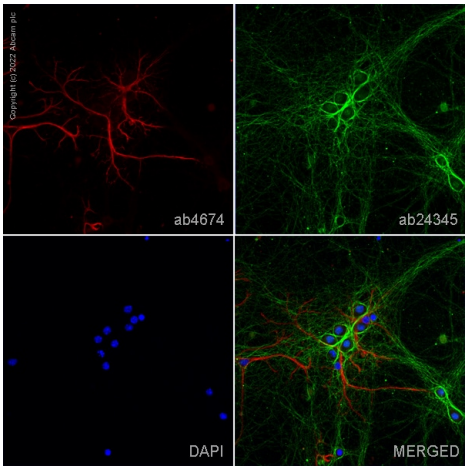


Immunocytochemistry - Anti-GFAP antibody (ab4674)

ab4674 staining GFAP in primary hippocampal rat neurons/glia, (obtained from Neuromics, cat. no. PC35101), DIV14. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab4674 at 1µg/ml and **ab87122**, Rabbit Poly to Mouse Fructose-bisphosphate aldolase C (No Modifications). Cells were then incubated with **ab150176**, Goat polyclonal Secondary Antibody to Chicken IgY - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in red) and **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in pseudocolour green). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunocytochemistry - Anti-GFAP antibody (ab4674)

ab4674 staining GFAP in primary mouse neurons/glia, DIV14 (prepared from E18 mouse hippocampal brain area, obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. C57EHP) cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab4674 at 1µg/ml and **ab24345**, Mouse mono Anti-L1CAM [2C2]. Cells were then incubated with **ab150176**, Goat polyclonal Secondary Antibody to Chicken IgY - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

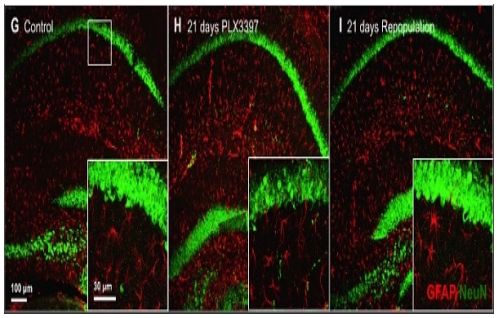
Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

Immunohistochemistry (PFA fixed) - Anti-GFAP antibody (ab4674)

GFAP antibody ab4674 was used with Tissue Clearing Kit **ab243298** to penetrate, stain and clear a 500 µm section of rat brain.

Learn more about **tissue clearing kits, reagents, and protocols** designed to make it easier to stain thick tissue sections and get more data from each valuable tissue section.

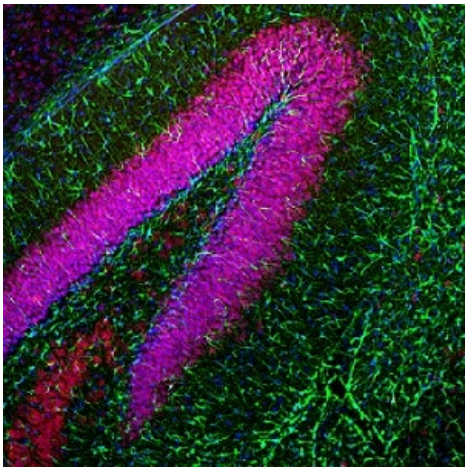


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody (ab4674)

10x and 63x z-stack images of the CA1 hippocampal region for each treatment are shown, with NeuN staining in green and GFAP staining in red.

Two month-old wild-type mice were placed on either control (n = 10) or inhibitor diet (PLX3397, provided at 290 mg/kg chow; n = 14) for 21 d, causing the elimination of approximately 99% of microglia brain-wide.

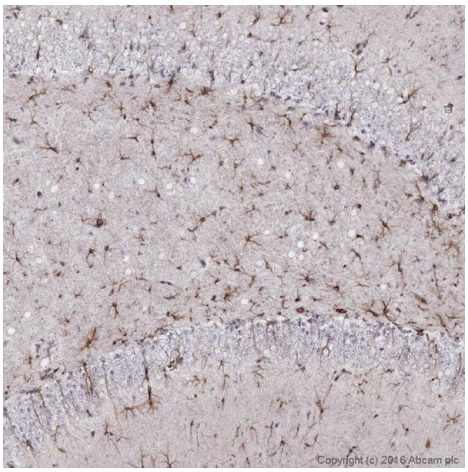
Fluorescent immunolabeling of the microglia followed a standard indirect technique (primary antibody followed by fluorescent secondary antibody). Brain tissue (sliced at 40 µm) was stained using the anti-ionized calcium-binding adapter molecule 1 (IBA1, polyclonal, rabbit) antibody (1:1000; Wako, Cat. #019–19741), mounted on slides, and coverslipped using Dapi Fluoromount-G (SouthernBiotech). Half brain images were obtained by stitching using a Zeiss AxioImager M2 upright microscope and Stereo Investigator software package from MicroBrightField. In addition, tissue was stained with anti-hexaribonucleotide binding protein-3 (NeuN, monoclonal, mouse) antibody (1:1000; Millipore; Cat. #MAB377) to label neurons and anti-glial fibrillary acidic protein (GFAP, polyclonal, chicken) antibody (1:500; Abcam; Cat. #ab4674) to label astrocytes, and 10x and 63x z-stack images obtained for each treatment using confocal microscopy.



Immunohistochemistry - Free Floating - Anti-GFAP antibody (ab4674)

Immunofluorescent analysis of a section of mouse hippocampus stained with ab4674 at a 1:5,000 dilution in green.

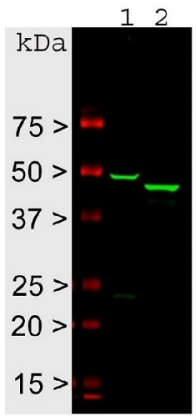
Costained with a rabbit pAb to FOX3/NeuN dilution 1:5,000, in red. The blue is DAPI staining of nuclear DNA. Following transcardial perfusion with 4% paraformaldehyde, mouse brain was post fixed for 24 hours, cut to 45 µM, and free-floating sections were stained. The GFAP antibody stains a network of astroglial cells while the Fox3/NeuN antibody stains the nuclei and proximal perikarya of neurons.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody (ab4674)

IHC image of GFAP staining in a formalin-fixed, paraffin-embedded mouse normal brain tissue section.

The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH 6). The section was incubated with ab4674 at 1/1000 dilution for 15 minutes at room temperature. A goat anti-chicken biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. The section was counterstained with haematoxylin and mounted with DPX.

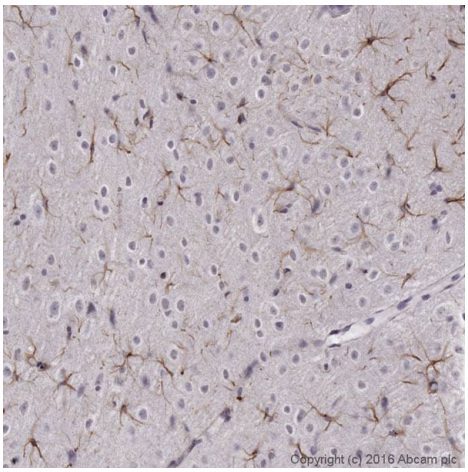


Western blot - Anti-GFAP antibody (ab4674)

All lanes : Anti-GFAP antibody (ab4674) at 1/5000 dilution

Lane 1 : Rat whole brain lysate
Lane 2 : Mouse whole brain lysate

Predicted band size: 50 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFAP antibody (ab4674)

IHC image of GFAP staining in a formalin fixed, paraffin embedded normal rat hippocampus tissue section.

The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH 6). The section was incubated with ab4674 at 1/1000 dilution for 15 minutes at room temperature. A goat anti-chicken biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. The section was counterstained with haematoxylin and mounted with DPX.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.co.jp/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors