

For Research Use Only

CoraLite®594-conjugated GFAP Monoclonal antibody

Catalog Number: CL594-60190

1 Publications



Basic Information

Catalog Number: CL594-60190	GenBank Accession Number: BC013596	Purification Method: Protein A purification
Size: 100ul , Concentration: 1000 ug/ml by Nanodrop;	GeneID (NCBI): 2670	CloneNo.: 4B2E10
Source: Mouse	UNIPROT ID: P14136	Recommended Dilutions: IF-P 1:50-1:500
Isotype: IgG2a	Full Name: glial fibrillary acidic protein	Excitation/Emission maxima wavelengths: 588 nm / 604 nm
Immunogen Catalog Number: AG10452	Calculated MW: 432 aa, 50 kDa	

Applications

Tested Applications: IF-P	Positive Controls: IF-P : rat brain tissue,
Cited Applications: IF	
Species Specificity: human, mouse, rat, pig	
Cited Species: mouse	

Background Information

GFAP Function GFAP (Glial fibrillary acidic protein) is a type III intermediate filament (IF) protein specific to the central nervous system (CNS). GFAP is one of the main components of the intermediate filament network in astrocytes and has been proposed as playing a role in cell migration, cell motility, maintaining mechanical strength, and in mitosis. Tissue specificity GFAP is expressed in central nervous system cells, predominantly in astrocytes. GFAP is commonly used as an astrocyte marker. However, GFAP is also present in peripheral glia and in non-CNS cells, including fibroblasts, chondrocytes, lymphocytes, and liver stellate cells (PMID: 21219963). **Involvement in disease** Mutations in GFAP lead to Alexander disease (OMIM: 203450), an autosomal dominant CNS disorder. The mutations present in affected individuals are thought to be gain-of-function. Upregulation of GFAP is a hallmark of reactive astrocytes, in which GFAP is present in hypertrophic cellular processes. Reactive astrogliosis is present in many neurological disorders, such as stroke, various neurodegenerative diseases (including Alzheimer's and Parkinson's disease), and neurotrauma. Isoforms Astrocytes express 10 different isoforms of GFAP that differ in the rod and tail domains (PMID: 25726916), which means that they differ in molecular size. Isoform expression varies during the development and across different subtypes of astrocytes. Not all isoforms are upregulated in reactive astrocytes. Post-translational modifications Intermediate filament proteins are regulated by phosphorylation. Six phosphorylation sites have been identified in GFAP protein, at least some of which are reported to control filament assembly (PMID: 21219963). Cellular localization GFAP localizes to intermediate filaments and stains well in astrocyte cellular processes. The antibody is conjugated with CL594, Ex/Em 593 nm/614 nm.

Notable Publications

Author	Pubmed ID	Journal	Application
Yue Wan	36598105	Glia	IF

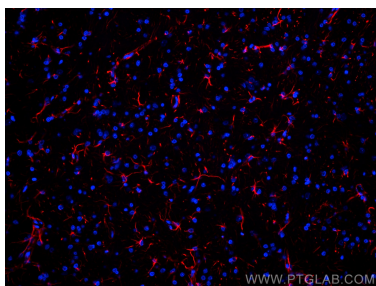
Storage

Storage:
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.
Storage Buffer:
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
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This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using CoraLite®594 GFAP antibody (CL594-60190, Clone: 4B2E10) at dilution of 1:200.