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#3655

## GFAP (GA5) Mouse mAb (Alexa Fluor® 488 Conjugate)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> IF-F, FC-FP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Mouse IgG1 kappa	<b>UniProt ID:</b> #P14136	<b>Entrez-Gene Id:</b> 2670
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<b>Product Usage Information</b>	<b>Application</b> Immunofluorescence (Frozen) Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:400 1:400
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
<b>Specificity/Sensitivity</b>	GFAP (GA5) Mouse mAb (Alexa Fluor® 488 Conjugate) #3655 lacks sensitivity to detect GFAP in moderate-and low-expressing astrocytes, which can result in uneven staining patterns.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with native GFAP purified from pig spinal cord. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct immunofluorescence of rat cells. The unconjugated antibody GFAP (GA5) Mouse mAb #3670 reacts with human, mouse and rat GFAP protein. CST expects that GFAP (GA5) Mouse mAb (Alexa Fluor® 488 Conjugate) will also recognize GFAP in these species.	
<b>Background</b>	The cytoskeleton consists of three types of cytosolic fibers: microfilaments (actin filaments), intermediate filaments, and microtubules. Major types of intermediate filaments are specifically expressed in particular cell types: cytokeratins in epithelial cells, glial fibrillary acidic protein (GFAP) in glial cells, desmin in skeletal, visceral, and certain vascular smooth muscle cells, vimentin in cells of mesenchymal origin, and neurofilaments in neurons. GFAP and vimentin form intermediate filaments in astroglial cells and modulate their motility and shape (1). In particular, vimentin filaments are present at early developmental stages, while GFAP filaments are characteristic of differentiated and mature brain astrocytes. Thus, GFAP is commonly used as a marker for intracranial and intraspinal tumors arising from astrocytes (2). In addition, GFAP intermediate filaments are also present in nonmyelin-forming Schwann cells in the peripheral nervous system (3).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Eng, L.F. et al. (2000) <i>Neurochem. Res.</i> 25, 1439-51.</li> <li>2. Goebel, H.H. et al. (1987) <i>Acta. Histochem. Suppl.</i> 34, 81-93.</li> <li>3. Jessen, K.R. et al. (1990) <i>Development</i> 109, 91-103.</li> </ol>	

**Species Reactivity** Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Applications Key** **IF-F:** Immunofluorescence (Frozen) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

**Cross-Reactivity Key** **H:** Human **M:** Mouse **R:** Rat

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