

GFAP Recombinant Alpaca VHH (SdAb2409.GFAP) - MiniMab™

VHH nanobody targeting glial fibrillary acidic protein (GFAP), part of our MiniMab™ nanobody series that have been engineered for optimal conjugate performance.

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Product Description

GFAP Recombinant Alpaca VHH (SdAb2409.GFAP) recognizes the glial fibrillary acidic protein (GFAP) expressed in neural tissues. This high-affinity camelid VHH nanobody is part of our MiniMabTM series that have been engineered for optimal conjugate performance. The nanobody has been validated for immunofluorescence microscopy and is available conjugated to CF® Dyes.

Features of MiniMab™ Nanobodies

- Superior to conventional antibodies: deeper tissue penetration, higher solubility and stability, and faster staining
- Minimal epitope displacement—perfect for super-resolution imaging
- Specifically developed and optimized for immunofluorescence
- Labeled with bright, photostable CF® Dyes, including near-infrared CF®740 option
- Available as conjugates with Biotium's best-in-class dyes for STORM

GFAP is a 49-kDa type III intermediate filament protein found in neural tissues, serving as a marker that differentiates astrocytes from other glial cells during the development of the central nervous system. Although three splice variants of GFAP have been identified, the alpha isoform is the most abundantly expressed in astrocytes. GFAP is capable of co-assembling with vimentin and nestin in astrocytes, though these interactions are not essential for its filament formation. Similar to other intermediate filaments, GFAP assembly is regulated by phosphorylation and dephosphorylation of its N-terminal domain. Mutations in the GFAP gene have been linked to Alexander disease, and elevated GFAP expression has been observed in certain tumors derived from glial cells.

Learn more about <u>CF® Dyes for super-resolution</u> as well as our innovative reagents for <u>immunofluorescence microscopy</u>; this includes our <u>NucSpot® Nuclear Stains</u> for bright and nuclear-specific staining in a wide color selection, and <u>CytoLiner™ Fixed Cell Membrane Stains</u> for robust membrane staining in formaldehyde-fixed cells.

<u>View our full selection of primary and secondary antibodies</u> available with bright CF® Dyes and other labels.

Product attributes

Antibody number	N001		
Antibody type	MiniMab™ SdAb (VHH)		
Clonality	Recombinant single-domain antibody		
Host species	Alpaca		
Clone	SdAb2409.GFAP		
Antibody reactivity (target)	GFAP		
Synonyms	Astrocyte or Intermediate Filament Protein, Glial Fibrillary Acidic Protein (GFAP)		
Species reactivity	Human, Mouse, Rat		
Human gene symbol	GFAP		
Entrez gene ID	14580		
Molecular weight	~50 kDa		
Cell/tissue expression	Glia		
Verified antibody applications	IF (verified)		
Positive control	Brain, Retina		
Antibody application notes	Immunofluorescence (HeLa): 1-5 ug/mL Optimal concentration to be determined by end-user.		
Antibody research areas	Neuroscience		
Antibody/conjugate formulation	Conjugates: PBS/0.1% rBSA/0.05% azide		
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended		
Storage Conditions	Store conjugates at 2 $^{\circ}\text{C}$ to 8 $^{\circ}\text{C},$ Protect fluorescent conjugates from light		
Shipping condition	Room temperature		
Regulatory status	For research use only (RUO)		
Product origin	Animal		

Call us: 800-304-5357 Email: btinfo@biotium.com

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Conjugation	Ex/Em	Conc.	STORM¹ compatibility	Catalog No.	Dye Features
CF®498	498/519 nm	100 ug/mL	Yes	N001-498-200UL	CF®498 Features
CF®568	562/584 nm	100 ug/mL	Yes	N001-568-200UL	CF®568 Features
CF®583R	585/609 nm	100 ug/mL	Yes	N001-583R-200UL	CF®583R Features
CF®647	652/668 nm	100 ug/mL	Yes	N001-647-200UL	CF®647 Features
CF®660C	667/685 nm	100 ug/mL	Yes	N001-660C-200UL	CF®660C Features
CF®680	681/698 nm	100 ug/mL	Yes	N001-680-200UL	CF®680 Features
CF®740	742/767 nm	100 ug/mL	No	N001-740-200UL	CF®740 Features

¹ STORM: Stochastical optical reconstruction microscopy. <u>Learn more about CF® Dyes for super-resolution</u>.

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