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## VGLUT1 Recombinant Alpaca VHH (SdAb2412.VGLUT1) - MiniMab™

Recombinant Alpaca VHH targeting vesicular glutamate transporter 1 (VGLUT1), part of our MiniMab™ nanobody series engineered for optimal conjugate performance.



### Product Description

VGLUT1 Recombinant Alpaca VHH (SdAb2412.VGLUT1) recognizes the vesicular glutamate transporter 1 (VGLUT1) expressed during neurotransmission. This high-affinity camelid VHH nanobody is part of our MiniMab™ 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

VGLUT1 is mainly found on synaptic vesicles at glutamatergic synapses, where it uses the proton gradient generated by vesicular ATPase to load glutamate into vesicles before their fusion with the plasma membrane and neurotransmitter release into the synaptic cleft.

This recombinant alpaca VHH binds strongly and specifically to the cytoplasmic region of rat and mouse VGLUT1 and is expected to also recognize human VGLUT1 due to high sequence similarity.

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

[View our full selection of primary and secondary antibodies](#) available with bright CF® Dyes and other labels.

## VGLUT1 Recombinant Alpaca VHH (SdAb2412.VGLUT1) - MiniMab™

Conjugation	Ex/Em	Conc.	STORM <sup>1</sup> compatibility	Catalog No.	Dye Features
<a href="#">CF®488A</a>	490/516 nm	100 ug/mL	Yes	<a href="#">N003-488A-200UL</a>	<a href="#">CF®498 Features</a>
<a href="#">CF®498</a>	498/519 nm	100 ug/mL	Yes	<a href="#">N003-498-200UL</a>	
<a href="#">CF®568</a>	562/584 nm	100 ug/mL	Yes	<a href="#">N003-568-200UL</a>	<a href="#">CF®568 Features</a>
<a href="#">CF®583R</a>	585/609 nm	100 ug/mL	Yes	<a href="#">N003-583R-200UL</a>	<a href="#">CF®583R Features</a>
<a href="#">CF®647</a>	652/668 nm	100 ug/mL	Yes	<a href="#">N003-647-200UL</a>	<a href="#">CF®647 Features</a>
<a href="#">CF®660C</a>	667/685 nm	100 ug/mL	Yes	<a href="#">N003-660C-200UL</a>	<a href="#">CF®660C Features</a>
<a href="#">CF®680</a>	681/698 nm	100 ug/mL	Yes	<a href="#">N003-680-200UL</a>	<a href="#">CF®680 Features</a>
<a href="#">CF®740</a>	742/767 nm	100 ug/mL	No	<a href="#">N003-740-200UL</a>	<a href="#">CF®740 Features</a>

<sup>1</sup> STORM: Stochastic optical reconstruction microscopy. [Learn more about CF® Dyes for super-resolution.](#)

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Product link: <https://biotium.com/product/vglut1-recombinant-alpaca-vhh-sdab2412-vglut1-minimab/>

### Product attributes

Antibody number	N003
Antibody type	MiniMab™ SdAb (VHH)
Clonality	Recombinant single-domain antibody
Host species	Alpaca
Clone	SdAb2412.VGLUT1
Antibody reactivity (target)	VGLUT1 (cytoplasmic domain)
Synonyms	Solute carrier family 17 member 7, SLC17A7, vesicular glutamate transporter
Species reactivity	Human, Mouse, Rat
Human gene symbol	SLC17A7
Entrez gene ID	116638
Molecular weight	~50 kDa
Cell/tissue expression	Neurons
Verified antibody applications	IF (verified)
Positive control	Brain, Retina
Antibody application notes	Immunofluorescence: 0.1 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 °C to 8 °C, Protect fluorescent conjugates from light
Shipping condition	Room temperature
Regulatory status	For research use only (RUO)
Product origin	Animal