Glowing products for science

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SYT1 Recombinant Alpaca VHH (SdAb2501.SYT1) - MiniMab™

Recombinant Alpaca VHH targeting the Synaptotagmin 1 (SYT1), part of our MiniMab™ SdAb series that have been engineered for optimal conjugate performance.

Product Description

SYT1 Recombinant Alpaca VHH (SdAb2501.SYT1) recognizes the Synaptotagmin 1 (SYT1) expressed in synaptic vesicles. This high-affinity single-domain antibody (SdAb), also known as camelid VHH or Nanobody®, is part of our MiniMab™ series of highly optimized conjugated probes. The SdAb has been validated for immunofluorescence microscopy and is available conjugated to CF® Dyes.

Features of MiniMab™ single-domain antibodies

- Superior to conventional antibodies: deeper tissue penetration, higher solubility and stability, and faster staining
- Minimal epitope-dye 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

Synaptotagmin 1 (SYT1) belongs to the synaptotagmin membrane-trafficking protein family comprising 17 members. These proteins are single-pass transmembrane proteins characterized by two calcium-binding domains within their intracellular segment. SYT1 is predominantly found in presynaptic boutons of axon terminals, where it associates with synaptic vesicles. It is critical in initiating vesicle fusion and facilitating neurotransmitter release in response to elevated calcium levels in the local environment.

This recombinant alpaca VHH binds specifically and strongly to the cytoplasmic region of rat and mouse SYT1 and is expected to also recognize human SYT1 due to high sequence similarity.

Learn more about MiniMab™ single domain antibodies paired with Biotium's industry-leading 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.

Product attributes

Antibody number	N002
Antibody type	Biotium Choice Primary, MiniMab™ SdAb (VHH), Primary
Clonality	Recombinant single-domain antibody
Host species	Alpaca
Clone	SdAb2501.SYT1
Antibody reactivity (target)	SYT1 (cytoplasmic domain)
Synonyms	Synaptotagmin 1, P65, SVP65, SYT
Species reactivity	Human, Mouse, Rat
Human gene symbol	SYT1
Entrez gene ID	20979
Molecular weight	48 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	Recombinant alpaca VHH produced in E.coli, Recombinant BSA produced in Chinese hamster ovary cells

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Conjugation	Ex/Em	Conc.	STORM[1] compatibility	Catalog No.	Dye Features
CF®488A	490/516 nm	100 ug/mL	Yes	N002-488A-200UL	CF®488A Features
CF®498	498/519 nm	100 ug/mL	Yes	N002-498-200UL	
CF®568	562/584 nm	100 ug/mL	Yes	N002-568-200UL	CF®568 Features
CF®583R	585/609 nm	100 ug/mL	Yes	N002-583R-200UL	CF®583R Features
CF®647	652/668 nm	100 ug/mL	Yes	N002-647-200UL	CF®647 Features
CF®660C	667/685 nm	100 ug/mL	Yes	N002-660C-200UL	CF®660C Features
CF®680	681/698 nm	100 ug/mL	Yes	N002-680-200UL	CF®680 Features
CF®740	742/767 nm	100 ug/mL	No	N002-740-200UL	CF®740 Features

[1] STORM: Stochastical optical reconstruction microscopy. Learn more about CF® Dyes for super-resolution.