

ALFA Halo fusion sdAb

Cat.No. N1541; Single Domain camelid antibody, 50 µg single domain antibody

Data Sheet

Reconstitution/ Storage	50 µg purified antibody, lyophilized from PBS. Albumin was added for stabilization. For reconstitution refer to the NanoTag reconstitution and storage instructions . Reconstitute immediately upon receipt! Avoid bright light when working with the antibody to minimize photo bleaching of the fluorescent dye. For detailed information, see back of the data sheet.
Applications	ICC: 1 : 500 IHC: 1 : 500
Label	Halo fusion
Clone	1G5
Specificity	ALFA-tag

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

The sdAb anti-ALFA Halo fusion combines an alpaca-derived single-domain antibody (sdAb) targeting the ALFA-tag with a dehalogenase-based technology. The Halo protein tag sequence is fused to the C-terminus of the sdAb anti-ALFA. The final application of the sdAb anti-ALFA Halo fusion depends on the Halo ligand used. For instance, when combined with a fluorescent Halo ligand, our sdAb anti-ALFA Halo fusion can be used in immunofluorescence for detailed protein visualization and manipulation. The ALFA system is NanoTag's patented technology, consisting of the ALFA-tag – a rationally designed epitope tag (SRLEEELRRRLTE) – and a set of high-affinity anti-ALFA sdAbs, available in various formats to suit diverse application needs.

Halo refers to a modified bacterial enzyme, haloalkane dehalogenase, engineered to covalently bind synthetic ligands. These ligands can be conjugated to various functional groups such as fluorophores, biotin, or beads, enabling numerous biochemical, proteomic, and imaging applications.

Access the online factsheet including applicable protocols at <https://sysy.com/product/N1541> or scan the QR-code.



FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies.** Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
Adding a carrier protein (e.g., BSA) enhances long-term stability.
Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
Adding a carrier protein such as BSA improves long-term stability.
Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.