

## ALFA Selector ST

Cat.No. N1511; Single Domain camelid antibody, 2000 µl affinity resin

### Data Sheet

Reconstitution/ Storage	2000 µL slurry For detailed information, see back of the data sheet.
Storage	Store at 4 °C, do not freeze
Applications	IP: yes
Immunogen	synthetic peptide SRLEEELRRRLTE (UniProt Id: not defined)
Formulation	50 % slurry in PBS containing 20 % Ethanol
Shelf life	Stable for 12 months

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

### Background

NanoTag® selector resins are based on a high-affinity single-domain antibody (sdAb) that is covalently immobilized on 4 % cross-linked agarose beads. The innovative, oriented and selective attachment via a flexible linker guarantees a high accessibility of the sdAbs and largely eliminates batch-to-batch variations. Due to the single-chain nature of sdAbs and their stable and covalent attachment, no leakage of light and heavy chains is observed during elution with SDS sample buffer. Selector resins thus features high affinity and superior capacity, while showing negligible unspecific background. Selector resins are compatible not only with physiological buffers but also with high stringency buffers. Selector resins thus provide great freedom to adjust the binding and washing conditions to the experimental needs.

The **ALFA-tag** is a novel, rationally designed epitope tag (SRLEEELRRRLTE) that forms a small and stable  $\alpha$ -helix that is functional irrespective of its position on the target protein in prokaryotic and eukaryotic hosts.

For a poster with detailed information on the ALFA System and its applications click here

[[ALFA\_sequences.png]]

The flanking proline residues are not part of the recognition sequence, but may aid in spacial separation of the tag from the protein of interest.

For immunoprecipitations we offer two types of ALFA Selector resins. Both ALFA Selectors are based on covalently coupled nanobodies that specifically recognize ALFA-tagged targets. ALFA Selector ST (for Super-Tight) offers the highest possible affinity for ALFA-tagged targets, which can be eluted under acidic or denaturing conditions. ALFA Selector PE (for Peptide Elution) displays an engineered nanobody with lower affinity (K<sub>d</sub> ~11 nM), which is optimized for peptide elution under physiological conditions. ALFA Selector CE (link) (for cold elutable) carries an engineered nanobody with lower affinity (K<sub>d</sub> 100 nM), which is optimized for peptide elution under physiological conditions at low temperature (4°C). All Selector resins feature low non-specific protein adsorption and therefore allowing clean and meaningful immunoprecipitations. Due to the covalent and oriented immobilization, the immobilized nanobodies will stay on the resin even when using harsh denaturing and/or reducing conditions for elution. In contrast to conventional immunoprecipitations, eluates from both ALFA Selectors will therefore be free from large amounts of antibody fragments.

### Selected References for N1511

The ALFA-tag is a highly versatile tool for nanobody-based bioscience applications.  
Götzke H, Kilisch M, Martínez-Carranza M, Sograte-Idrissi S, Rajavel A, Schlichthaerle T, Engels N, Jungmann R, Stenmark P, Opazo F, Frey S, et al.  
Nature communications (2019) 101: 4403.. IP

Access the online factsheet including applicable protocols at <https://sysy.com/product/N1511> or scan the QR-code.



## FAQ - How should I store my antibody?

### Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

### Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

### Product Specific Hints for Storage

#### Control proteins / peptides

- Store at -20°C to -80°C.

#### Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

## Avoid repeated freeze-thaw cycles for all antibodies!

## FAQ - How should I reconstitute my antibody?

### Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.