SYSY Antibodies

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NGF receptor p75

Cat.No. 396 005; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: not tested yet **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 100 up to 1 : 500 **IHC-P (FFPE)**: 1 : 400 up to 1 : 1000
Immunogen	Recombinant protein corresponding to AA 266 to 417 from mouse NGF receptor (UniProt Id: Q9Z0W1)
Reactivity	Reacts with: mouse (Q9Z0W1), rat (P07174). Other species not tested yet.

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

Background

NGF (**N**erve **G**rowth **F**actor) **receptor p75**, also termed p75NTR, NGFR and CD271, is a low affinity neurotrophin receptor and a single-pass type I transmembrane protein. Its ligands include NGF, brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3) and NT-4.
NGF receptor p75 is expressed by many cell types including neurons, Schwann cells, mesenchymal stem/stromal cells, follicular dendritic cells, and various neural crest cells and their tumors.
By mediating neurotrophin signals, the receptor appears to play a role in multiple processes, including neuronal growth, migration, differentiation and cell death during development of the central and peripheral nervous system.
NGF receptor p75 binds its ligands as a homodimer but can also form heterodimers with other receptors such as TrkA, TrkB, TrkC, Nogo receptor and sortilin. The precise multimeric receptor complex formed will determine the ligand being recognized and the biological response to its binding.

Selected General References

The p75 neurotrophin receptor: at the crossroad of neural repair and death.
Meeker RB et al. Neural Regen Res (2015) PubMed:26109945

Nuclear pore complex remodeling by p75(NTR) cleavage controls TGF-β signaling and astrocyte functions.
Schachtrup C et al. Nat. Neurosci. (2015) PubMed:26120963

Specific marker expression and cell state of Schwann cells during culture in vitro.
Liu Z et al. PLoS ONE (2015) PubMed:25859851

Role of p75 neurotrophin receptor in stem cell biology: more than just a marker.
Tomellini E et al. Cell. Mol. Life Sci. (2014) PubMed:24481864

Drain of the brain: low-affinity p75 neurotrophin receptor affords a molecular sink for clearance of cortical amyloid β by the cholinergic modulator system.
Ovsepian SV et al. Neurobiol. Aging (2013) PubMed:23747048

p75 neurotrophin receptor is a clock gene that regulates oscillatory components of circadian and metabolic networks.
Baeza-Raja B et al. J. Neurosci. (2013) PubMed:23785138

p75 neurotrophin receptor signaling in nervous system injury and degeneration: paradox and opportunity.
Ibáñez CF et al. Trends Neurosci. (2012) PubMed:22503537

The p75 neurotrophin receptor.
Underwood CK et al. Int. J. Biochem. Cell Biol. (2008) PubMed:17681869

Access the online factsheet including applicable protocols at https://sysy.com/product/396005 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.