

Neurogenin2

Cat.No. 530 205; 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 ₂ O 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: not tested yet IHC: 1 : 500 IHC-P: not recommended
Immunogen	Recombinant protein comprising residues near the amino and carboxy terminus of mouse Neurogenin2 (UniProt Id: P70447)
Reactivity	Reacts with: mouse (P70447). Other species not tested yet.

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

Background

Neurogenins (Ngns) are basic helix-loop-helix (bHLH) transcription factors that play a crucial role in the development of the nervous system and the endocrine pancreas (1, 2). In mammals, the family comprises three members: Neurogenin1 (Ngn1), **Neurogenin2 (Ngn2)**, and Neurogenin3 (Ngn3). Ngn1 and **2** are involved in early stages of neuronal differentiation and promote the transition of neural progenitor cells into neurons and inhibit glial cell formation in a spatially and temporally regulated manner (1, 3).

Additionally, **Ngn2** plays a pivotal role in the specification of motor neurons and interneurons in the spinal cord. Phosphorylation of **Ngn2** influences its ability to direct the fate of neural progenitors, affecting the balance between different neuronal subtypes (4, 5).

Ngn3 is a pro-endocrine transcription factor, primarily associated with the development of the endocrine pancreas. It is essential for the differentiation of endocrine progenitor cells into various hormone-producing cell types within the islets of Langerhans (2).

Selected General References

bHLH transcription factors in neural development, disease, and reprogramming.
Dennis DJ et al. Brain Res (2019) PubMed:29544733

Neurogenin3: a master regulator of pancreatic islet differentiation and regeneration.
Rukstalis JM et al. Islets (2009) PubMed:21099270

Neurogenesis or neuronal specification: phosphorylation strikes again!
Lai HC et al. Neuron (2008) PubMed:18400155

Regulation of motor neuron specification by phosphorylation of neurogenin 2.
Ma YC et al. Neuron (2008) PubMed:18400164

Neurogenin1 and neurogenin2 control two distinct waves of neurogenesis in developing dorsal root ganglia.
Ma Q et al. Genes Dev (1999) PubMed:10398684

Access the online factsheet including applicable protocols at <https://sysy.com/product/530205> 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.