SYSY Antibodies

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Neuropeptide Y

Cat.No. 394 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 µl H_2O, then aliquot and store at -20°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 up to 1 : 1000 **IHC**: 1 : 500 up to 1 : 1000 **IHC-P (FFPE)**: 1 : 500
Immunogen	Synthetic peptide corresponding to AA 1 to 16 from mouse Neuropeptide Y (UniProt Id: P57774)
Reactivity	Reacts with: mouse (P57774), rat (P07808). Other species not tested yet.
Specificity	Specific for Neuropeptide Y. May cross-react to PYY due to sequence homology.

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

Background

Neuro**p**eptide **Y** (**NPY**) is a 36-amino acid polypeptide that acts as a neurotransmitter in the brain and in the autonomic nervous system. It is produced and secreted by neurons of the sympathetic nervous system and neurons in the brain, e.g. the hypothalamus. NPY is involved in several physiological functions, including: increasing food intake and storage of energy as fat, reducing anxiety and stress, reducing pain perception, and lowering blood pressure.

Selected References for 394 004

VIP-immunoreactive interneurons within circuits of the mouse basolateral amygdala.
Rhomberg T, Rovira-Esteban L, Vikór A, Paradiso E, Kremser C, Nagy-Pál P, Papp OI, Tasan R, Erdélyi F, Szabó G, Ferraguti F, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2018) : . . **IHC; tested species: mouse**

CaMKIIα Promoter-Controlled Circuit Manipulations Target Both Pyramidal Cells and Inhibitory Interneurons in Cortical Networks.
Veres JM, Andrasi T, Nagy-Pal P, Hajos N
eNeuro (2023) 104: . . **IHC; tested species: mouse**

Reprogramming reactive glia into interneurons reduces chronic seizure activity in a mouse model of mesial temporal lobe epilepsy.
Lentini C, d'Orange M, Marichal N, Trottmann MM, Vignoles R, Foucault L, Verrier C, Massera C, Raineteau O, Conzelmann KK, Rival-Gervier S, et al.
Cell stem cell (2021) : . . **IHC; tested species: mouse**

Activity-dependent reconnection of adult-born dentate granule cells in a mouse model of frontotemporal dementia.
Terreros-Roncal J, Flor-García M, Moreno-Jiménez EP, Pallas-Bazarra N, Rábano A, Sah N, van Praag H, Giacomini D, Schinder AF, Ávila J, Llorens-Martín M, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2019) : . . **IHC; tested species: mouse**

Selected General References

Neuropeptide Y and its receptors in ventricular endocardial endothelial cells.
Jacques D et al. Can. J. Physiol. Pharmacol. (2017) PubMed:28738162

Arcuate neuropeptide Y inhibits sympathetic nerve activity via multiple neuropathways.
Shi Z et al. J. Clin. Invest. (2017) PubMed:28628036

Neuropeptide Y expression marks partially differentiated β cells in mice and humans.
Rodnoi P et al. JCI Insight (2017) PubMed:28614797

Neuropeptide Y modifies the hypertrophic response of adult ventricular cardiomyocytes to norepinephrine.
Kanevskij M et al. Cardiovasc. Res. (2002) PubMed:11922898

Differential effects of serotonin (5-HT) lesions and synthesis blockade on neuropeptide-Y immunoreactivity and 5-HT1A, 5-HT1B/1D and 5-HT2A/2C receptor binding sites in the rat cerebral cortex.
Compan V et al. Brain Res. (1998) PubMed:9622647

Access the online factsheet including applicable protocols at https://sysy.com/product/394004 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.