

Somatostatin-28

Cat.No. 366 006; Polyclonal chicken antibody, 200 µl specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For reconstitution add 200 µl H ₂ O. 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 recommended IP: not tested yet ICC: 1 : 500 up to 1 : 1000 IHC: 1 : 500 up to 1 : 1000 IHC-P: 1 : 500 up to 1 : 1000 ExM: (see remarks)
Immunogen	Synthetic peptide corresponding to AA 89 to 100 from mouse Somatostatin (UniProt Id: P60041)
Reactivity	Reacts with: rat (P60042), mouse (P60041). Other species not tested yet.
Specificity	This antibody preferentially recognizes somatostatin-28. It only shows minor cross-reactivity to the unprocessed precursor protein and does not detect somatostatin-14.
Remarks	ExM: This antibody has been successfully used in LICONN expansion microscopy method (Tavakoli et al. 2025, PMID: 40335689).

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

Background

Somatostatin, also referred to as **SST**, **growth hormone-inhibiting hormone** or **GHIH**, is a peptide hormone that regulates the endocrine system and affects neurotransmission and cell proliferation via interaction with G protein-coupled somatostatin receptors. It inhibits the secretion of many important hormones, including insulin, glucagon and somatotropin (also designated growth hormone, or GH). Somatostatin has two forms, active 14 amino acid and 28 amino acid. They are produced by alternative cleavage of the single precursor protein encoded by this gene.

Selected References for 366 006

CXCL12 Engages Cortical Inhibitory Neurons to Enhance Dendritic Spine Plasticity and Structured Network Activity. Ho C, Luchetta J, Nash B, Festa LK, Johnson JA, Sacan A, Jackson JG, Sanz-Clemente A, Brandimarti R, Meucci O. The Journal of neuroscience : the official journal of the Society for Neuroscience (2025) 4524: . . **ICC; tested species: rat**

Light-microscopy-based connectomic reconstruction of mammalian brain tissue. Tavakoli MR, Lyudchik J, Januszewski M, Vistunou V, Agudelo Dueñas N, Vorlauffer J, Sommer C, Kreuzinger C, Oliveira B, Cenameri A, Novarino G, et al. Nature (2025) 6428067: 398-410. . **EXM; tested species: mouse**

Amygdala inhibitory neurons as loci for translation in emotional memories. Shrestha P, Shan Z, Mamcarz M, Ruiz KSA, Zerihoun AT, Juan CY, Herrero-Vidal PM, Pelletier J, Heintz N, Klann E. Nature (2020) 5867829: 407-411. . **IHC; tested species: mouse**

Moderate beta-cell ablation triggers synergic compensatory mechanisms even in the absence of overt metabolic disruption. Mathisen AF, Larsen U, Kavli N, Unger L, Daian LM, Vacaru AM, Vacaru AM, Herrera PL, Ghila L, Chera S. Communications biology (2024) 71: 833. . **IHC; tested species: mouse**

INSIHGT: an accessible multi-scale, multi-modal 3D spatial biology platform. Yau CN, Hung JTS, Campbell RAA, Wong TCY, Huang B, Wong BTY, Chow NKN, Zhang L, Tsoi EPL, Tan Y, Li JJX, et al. Nature communications (2024) 151: 10888. . **IHC; tested species: mouse**

Purkinje cell microzones mediate distinct kinematics of a single movement. Blot FGC, White JJ, van Hattem A, Scotti L, Balaji V, Adolfs Y, Pasterkamp RJ, De Zeeuw CI, Schonewille M. Nature communications (2023) 141: 4358. . **IHC; tested species: mouse**

Selected General References

Somatostatin and its receptors from fish to mammals. Gahete MD et al. Ann. N. Y. Acad. Sci. (2010) PubMed:20633132

The somatostatin-28(1-12)-NPAMAP sequence: an essential helical-promoting motif governing prosomatostatin processing at mono- and dibasic sites. Brakch N et al. Biochemistry (2002) PubMed:11814357

Interrelationships between somatostatin sst2A receptors and somatostatin-containing axons in rat brain: evidence for regulation of cell surface receptors by endogenous somatostatin. Dournaud P et al. J. Neurosci. (1998) PubMed:9437026

Somatostatin antisense oligodeoxynucleotide-mediated stimulation of lymphocyte proliferation in culture. Aguila MC et al. Endocrinology (1996) PubMed:8612489

All five cloned human somatostatin receptors (hsSTR1-5) are functionally coupled to adenylyl cyclase. Patel YC et al. Biochem. Biophys. Res. Commun. (1994) PubMed:7905265

Site-specific mutagenesis identifies amino acid residues critical in prohormone processing. Gomez S et al. EMBO J. (1989) PubMed:2573512

Sequence of the human somatostatin I gene. Shen LP et al. Science (1984) PubMed:6142531

Access the online factsheet including applicable protocols at <https://sysy.com/product/366006> 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 a 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.