SYSY Antibodies

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c-Fos

Cat.No. 226 017; Monoclonal rat antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For **reconstitution** add 100 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**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 up to 1 : 1000 **IHC**: 1 : 1000 up to 1 : 5000 (see remarks) **IHC-P (FFPE)**: 1 : 100 up to 1 : 200 **iDISCO**: external data (see remarks) **FACS**: yes
Clone	108B5H5
Subtype	IgG2a (κ light chain)
Immunogen	Synthetic peptide corresponding to residues near the amino terminus of rat c-Fos (UniProt Id: P12841)
Reactivity	Reacts with: mouse (P01101), rat (P12841), human (P01100). Other species not tested yet.
Matching control	226-0P
Remarks	**IHC**: For best results tissue sections should be stored at -20°C in cryoprotectant solution. Prolonged storage at 4°C leads to a substantial loss of signal. **iDISCO**: This antibody has been successfully applied and published for this method by customers (see application-specific references).

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

Background

The Fos gene family consists of 4 members: **c-Fos**, FosB, FosL1, and FosL2, also called Fos related antigen 1 and 2 (FRA1 and 2). These leucine zipper proteins can dimerize with proteins of the Jun family leading to the formation of the transcription factor complex AP1 (1).
The expression of Fos proteins is rapidly and transiently induced by different extracellular stimuli such as growth factors, cytokines, neurotransmitters, polypeptide hormones and stress (2).
In addition Fos proteins can be phosphorylated by ERK kinases modulating transcriptional activity, protein stability and localization (3). c-Fos is the homologue to the Finkel-Biskis-Jinkins (FBJ) murine osteosarcoma virus oncogene (4).

For more information on protein expression pattern, please refer to the overview image in our SYSY Antibodies ATLAS.

Selected References for 226 017

Npas4 drives the effects of early social isolation on social behaviors and prefrontal parvalbumin neurons.
Jindal K, Ringland A, Fitzcharles S, Redd C, Wheeler DG, Coutellier L
Progress in neurobiology (2025) 252: 102810. . **IDISCO; tested species: mouse**

Transcriptional dynamics of murine motor neuron maturation in vivo and in vitro.
Patel T, Hammelman J, Aziz S, Jang S, Closser M, Michaels TL, Blum JA, Gifford DK, Wichterle H
Nature communications (2022) 131: 5427. . **IHC, ICC; tested species: mouse**

The psychoplastogen tabernanthalog induces neuroplasticity without proximate immediate early gene activation.
Aarrestad IK, Cameron LP, Fenton EM, Casey AB, Rijsketic DR, Patel SD, Sambyal R, Johnson SB, Ly C, Viswanathan J, Barragan EV, et al.
Nature neuroscience (2025) 289: 1919-1931. . **IHC, IDISCO; tested species: mouse**

Paraventricular Hypothalamic GLP-1R Neurons Mediate Propofol-Induced Suppression of Food Intake.
Liang J, Yin M, Su Y, Zhang L, Han Y
Journal of integrative neuroscience (2026) 259: 52398. . **IHC; tested species: mouse**

GRASPing experience-dependent protein expression signatures enriched for hippocampal engram cell synapses.
Moharana B, Nemat P, Pullen RM, Gradl A, Schipper M, Savage JE, Klaassen RV, van der Loo RJ, Chadick CH, Koopmans F, Gouwenberg Y, et al.
Science advances (2026) 1220: eadv3557. . **IHC; tested species: mouse**

Phenotypic diversity is caused by non-linear genetic interactions between two SNAREopathy genes.
Kovačević J, Houy S, Pires J, Kádková A, Li Z, Lammertse HCA, Martins JS, Öttl M, Wierda K, Wortel J, Sørensen JB, et al.
Molecular psychiatry (2026) : . . **IHC; tested species: mouse**

Regulation of physical activity and energy expenditure through Phf6 in the medial preoptic area.
Wang J, Liu B, Wu X, Sun J, Wang Y, He L, Gan L, Du X, Ruan J, Pi L, Wu QF, et al.
Nature communications (2026) : . . **IHC; tested species: mouse**

The vagus nerve activated by inflammation co-transmits acute visceral pain via the NTS-PVN pathway.
Zhao YT, Zheng ZK, Yang XH, Duan YJ, Xie X, Chen L, Xu YZ, Zheng Y, Liu YQ, Zhao YY, Tang XQ, et al.
Brain, behavior, and immunity (2026) 136: 106551. . **IHC; tested species: mouse**

PinkyCaMP: an mScarlet-based calcium sensor with enhanced brightness, photostability and multiplexing capabilities.
Fink R, Imai S, Gockel N, Lauer G, Renken K, Wietek J, Lamothe-Molina PJ, Fuhrmann F, Mittag M, Ziebarth T, Canziani A, et al.
Nature methods (2026) : . . **IHC; tested species: mouse**

Fronto-insular circuit mechanisms of accelerated intermittent theta burst stimulation.
Johnson SB, Rocks D, Chalençon L, Johnson K, Hassan U, Arefin A, Akgül G, Donatelle A, Asher H, Elbau I, Estrin D, et al.
Cell (2026) 18910: 3071-3090.e27. . **IHC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/226017 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.