

c-Fos

Cat.No. 226 003; Polyclonal rabbit antibody, 100 µl specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For reconstitution add 100 µl H ₂ O. Then aliquot and store at -20°C until use. For detailed information, see back of the data sheet.
Applications	WB: 1 : 250 up to 1 : 500 (AP staining) IP: not tested yet ICC: 1 : 1000 IHC: 1 : 1000 (see remarks) IHC-P/FFPE: not recommended (see remarks)
Immunogen	Synthetic peptide corresponding to AA 2 to 17 from rat c-Fos (UniProt Id: P12841)
Reactivity	Reacts with: human (P01100), rat (P12841), mouse (P01101), monkey, ape, cow, dog, pig. Other species not tested yet.
Specificity	Specific for c-Fos.
Matching control	226-0P
Remarks	IHC: Signal quality is strongly enhanced when antibody is incubated at RT. 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. IHC-P: Cat. no. 226 013 is recommended for this application.

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

Access the online factsheet including applicable protocols at <https://sysy.com/product/226003> or scan the QR-code.



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, 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-Jenkins (FBJ) murine osteosarcoma virus oncogene (4).

Selected References for 226 003

- Cyclosomatostatin-induced catalepsy in aged rats: Specific change of brain c-Fos protein expression in the lateral entorhinal cortex.
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Brain research bulletin (2020) 159: 79-86. . **WB; tested species: rat**
- Detecting and discriminating novel objects: The impact of perirhinal cortex disconnection on hippocampal activity patterns.
Kinnavane L, Amin E, Olarte-Sánchez CM, Aggleton JP
Hippocampus (2016) 2611: 1393-1413. . **IHC**
- Human osteosarcoma cells respond to sorafenib chemotherapy by downregulation of the tumor progression factors S100A4, CXCR4 and the oncogene FOS.
Walter I, Wolfesberger B, Miller I, Mair G, Burger S, Gallè B, Steinborn R
Oncology reports (2014) 313: 1147-56. . **ICC; tested species: human**
- Gene regulatory networks controlling differentiation, survival, and diversification of hypothalamic Lhx6-expressing GABAergic neurons.
Kim DW, Liu K, Wang ZQ, Zhang YS, Bathini A, Brown MP, Lin SH, Washington PW, Sun C, Lindtner S, Lee B, et al.
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- Activity in projection neurons from prelimbic cortex to the PVT is necessary for retrieval of morphine withdrawal memory.
Yu L, Chu C, Yuan Y, Guo X, Lei C, Sheng H, Yang L, Cui D, Lai B, Zheng P
Cell reports (2021) 351: 108958. . **IHC; tested species: mouse**
- Multi-pronged neuromodulation intervention engages the residual motor circuitry to facilitate walking in a rat model of spinal cord injury.
Bonizzato M, James ND, Pidpruzhnykova G, Pavlova N, Shkorbatova P, Baud L, Martinez-Gonzalez C, Squair JW, DiGiovanna J, Barraud Q, Micera S, et al.
Nature communications (2021) 121: 1925. . **IHC; tested species: rat**
- Effect of basal forebrain somatostatin and parvalbumin neurons in propofol and isoflurane anesthesia.
Cai S, Tang AC, Luo TY, Yang SC, Yang H, Liu CX, Shu Y, Pan YC, Zhang Y, Zhou L, Yu T, et al.
CNS neuroscience & therapeutics (2021) : . . **IHC; tested species: mouse**
- Lateral Habenula Glutamatergic Neurons Modulate Isoflurane Anesthesia in Mice.
Liu C, Liu J, Zhou L, He H, Zhang Y, Cai S, Yuan C, Luo T, Zheng J, Yu T, Zhang M, et al.
Frontiers in molecular neuroscience (2021) 14: 628996. . **IHC; tested species: mouse**
- High dietary salt amplifies osmoreponsiveness in vasopressin-releasing neurons.
Levi DI, Wyrosdic JC, Hicks AJ, Andrade MA, Toney GM, Prager-Khoutorsky M, Bourque CW
Cell reports (2021) 3411: 108866. . **IHC; tested species: rat**
- Behavioural and neurochemical mechanisms underpinning the feeding-suppressive effect of GLP-1/CCK combinatorial therapy.
Roth E, Benoit S, Quentin B, Lam B, Will S, Ma M, Heeley N, Darwish T, Shrestha Y, Gribble F, Reimann F, et al.
Molecular metabolism (2021) 43: 101118. . **IHC; tested species: mouse**
- The ventral hippocampus CA3 is critical in regulating timing uncertainty in temporal decision-making.
Çavdaroğlu B, Riaz S, Shi Y, Balcı F, Ito R
Cell reports (2021) 345: 108694. . **IHC; tested species: rat**
- A circuit of mossy cells controls the efficacy of memory retrieval by Gria2i inhibition of Gria2.
Li X, Chen W, Yu Q, Zhang Q, Zhang T, Huang X, Li H, He A, Yu H, Jing W, Du H, et al.
Cell reports (2021) 347: 108741. . **IHC; tested species: mouse**
- Targeted delivery of engineered auditory sensing protein for ultrasound neuromodulation in the brain.
Wu CY, Fan CH, Chiu NH, Ho YJ, Lin YC, Yeh CK
Theranostics (2020) 108: 3546-3561. . **IHC; tested species: mouse**

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 10 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 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.