

# Product Datasheet

## c-Fos Antibody (2H2) - BSA Free NBP2-50037

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NBP2-50037**

c-Fos Antibody (2H2) - BSA Free

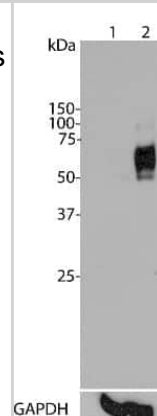
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2H2
Preservative	5mM Sodium Azide
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	50-65 kDa

Product Description	
Description	Novus Biologicals Knockout (KO) Validated Mouse c-Fos Antibody (2H2) - BSA Free (NBP2-50037) is a monoclonal antibody validated for use in IHC, WB and ICC/IF. Anti-c-Fos Antibody: Cited in 23 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	2353
Gene Symbol	FOS
Species	Human, Mouse, Rat
Reactivity Notes	Rat reactivity reported in scientific literature (PMID:33091429).
Immunogen	This c-Fos Antibody (2H2) was developed against full length recombinant human c-Fos protein expressed in and purified from E. coli. [UniProt# P01100]

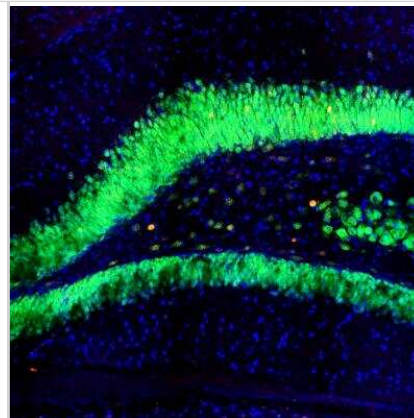
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Knockout Validated
Recommended Dilutions	Western Blot 1:1000 - 1:2000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:1000, Knockout Validated

**Images**

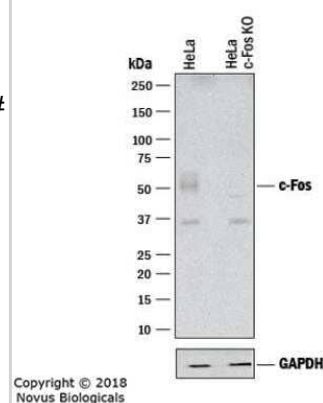
Western Blot: c-Fos Antibody (2H2) [NBP2-50037] - Top panel: Analysis of c-Fos expression in HeLa cells using NBP2-50037. Lane 1: HeLa cells were serum-starved for 36 hours. Lane 2: Serum-starved HeLa cells were stimulated with 20% FBS (fetal bovine serum) for 2 hours. NBP2-50037 recognizes bands in the range of 50-65 kDa, which represent multiple forms of c-Fos. Serum starvation attenuates c-Fos expression, while 20% FBS strongly stimulates c-Fos expression. Bottom panel: Blot was stripped and probed with monoclonal antibody against GAPDH (NB300-221) used as loading control.



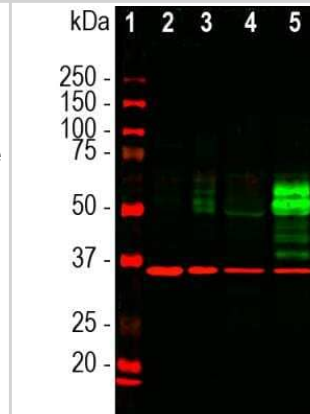
Immunocytochemistry/Immunofluorescence: c-Fos Antibody (2H2) [NBP2-50037] - Section of rat hippocampus stained with mouse monoclonal antibody to c-FOS NBP2-50037 in red and counterstained with rabbit polyclonal antibody to FOX3/NeuN. DAPI reveals nuclei of neurons and glia in blue. The hippocampal neurons stain green for FOX3/NeuN and a few also are expressing c-FOS, and so appear orange. These cells were spontaneously active at the time the animal was sacrificed.



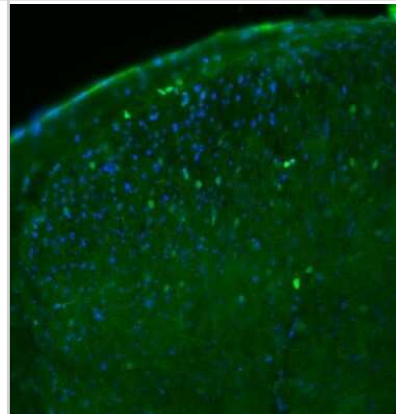
Western Blot: c-Fos Antibody (2H2) [NBP2-50037] - Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and c-Fos knockout (KO) HeLa cell line. PVDF membrane was probed with 1:1000 of Mouse Anti-Human c-Fos Monoclonal Antibody (Catalog # NBP2-50037) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog #HAF018). Specific band was detected for c-Fos at approximately 52 kDa (as indicated) in the parental HeLa cell line, but is not detectable in the knockout HeLa cell line. This experiment was conducted under reducing conditions.



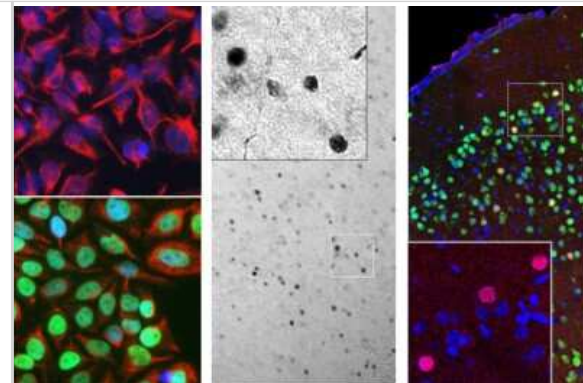
Western Blot: c-Fos Antibody (2H2) [NBP2-50037] - Analysis of cell lysates using mouse c-Fos mAb, dilution 1:1,000 (Green), and rabbit GAPDH pAb, dilution 1:20,000 (Red) used as a loading control. [1] protein standard (red), [2] HeLa cells in serum free media. [3] HeLa cells stimulated with 20% fetal bovine serum for 2hrs after 36hrs in serum free media. [4] rat cortical neurons. [5] rat cortical neurons treated with membrane depolarization buffer for 5hrs. Multiple bands at 50-65kDa in stimulated or treated cell lysates correspond to different forms of the c-Fos protein. The single band at 37 kDa represents GAPDH protein.



Immunohistochemistry: c-Fos Antibody (2H2) [NBP2-50037] - pAb 1:1000 (green), DAPI counterstain (blue) on 30 micron cryosection of mouse spinal cord. This image was submitted via customer Review.



Immunocytochemistry/Immunofluorescence: c-Fos Antibody (2H2) [NBP2-50037] - Left: NBP2-50037 staining (green) in HeLa cells, which were treated with serum-starvation for 36 hrs, followed by 2 hrs 20% FBS stimulation (bottom), or PBS treatment (top). Green c-Fos staining only localizes in the nuclei of stimulated cells, but not in un-stimulated cells. Cells are counter-stained with chicken pAb against Vimentin (NB300-223, red). Blue shows DAPI staining of nucleus. Middle: Mouse brain section (45  $\mu$ M; fixed by transcardial perfusion with 4% PFA) labeled with NBP2-50037 using a standard HRP-DAB staining technique. Cells expressing c-Fos show dark color in nucleus. Right: Mouse cortical section labeled with NBP2-50037 (red) and rabbit polyclonal anti-NeuN (NBP1-92716, green) using IF confocal. Neurons positive for c-Fos and RBFOX3/NeuN appear to be yellow. Inset shows an enlarged image of NBP2-50037 staining. Nuclei are labeled with Dapi (blue).



## Publications

Zhai J, Zhang X, Wang X et al. Differential brain activation and network connectivity in social interactions presence and absence of physical contact. *Communications Biology* 2025-07-03 [PMID: 40603622]

Nagaoka K, Asaoka N, Nagayasu K et al. Enhancement of adenosine A2A signaling improves dopamine D2 receptor antagonist-induced dyskinesia via  $\beta$ -arrestin signaling *Frontiers in neuroscience* 2023-01-24 [PMID: 36760795]

Devoght J, Comhair J, Morelli G, Rigo JM et Al. Dopamine-mediated striatal activity and function is enhanced in GlyR $\beta$ 2 knockout animals *iScience* 2023-08-09 [PMID: 37554441]

Xi D, Long C, Lai M, Casella A et Al. Ablation of Oxytocin Neurons Causes a Deficit in Cold Stress Response *J Endocr Soc* 2017-12-22 [PMID: 29264556]

Wei HR, Tang L, Yang XL, Chen CM et Al. A microglial activation cascade across cortical regions underlies secondary mechanical hypersensitivity to amputation *Cell Rep* 2024-02-18 [PMID: 38368612]

Zhang J, Peng Y, Liu C et al. Dopamine D1-receptor-expressing pathway from the nucleus accumbens to ventral pallidum-mediated sevoflurane anesthesia in mice *CNS neuroscience & therapeutics* 2023-05-19 [PMID: 37208941]

Noguchi H, Arela JC, Ngo TT et al. Shh from mossy cells contributes to preventing NSC pool depletion after seizure-induced neurogenesis and in aging *bioRxiv : the preprint server for biology* 2023-08-22 [PMID: 37662214] (Immunohistochemistry, Mouse)

Hirofumi Noguchi, Jessica Chelsea Arela, Thomas Ngo, Laura Cocas, Samuel Pleasure, Joseph G Gleeson, John R Huguenard Shh from mossy cells contributes to preventing NSC pool depletion after seizure-induced neurogenesis and in aging *eLife* 2023-12-11 [PMID: 38079471]

Bao C, Huang J, Wu H et al. Moxibustion alleviates depression-like behavior in rats with Crohn's disease by inhibiting the kynurenine pathway metabolism in the gut-brain axis *Frontiers in neuroscience* 2022-12-07 [PMID: 36570839] (WB, Rat)

Kawai H, Bouchekioua Y, Nishitani N et al. Median raphe serotonergic neurons projecting to the interpeduncular nucleus control preference and aversion *Nature communications* 2022-12-22 [PMID: 36550097] (IHC-Fr, Mouse)

### Details:

Dilution used in IHC-Fr 1:200

Nagai Y, Kisaka Y, Nomura K et al. Dorsal raphe serotonergic neurons preferentially reactivate dorsal dentate gyrus cell ensembles associated with positive experience *Cell reports* 2023-02-22 [PMID: 36821440] (IHC, Mouse)

Zhai J, Li X, Hao H et al. Whisker Stimulation Alleviate ASD Behavior of BTBR Mice by Regulating Piezo2 Expression in DRG and Neuron Function in S1 and mPFC SSRN *Electronic Journal* 2022-12-20

More publications at <http://www.novusbio.com/NBP2-50037>



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### **Products Related to NBP2-50037**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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