c-Fos Recombinant Antibody [PSH05-77] - Rat IgG1 (Chimeric)

HA601373

Product Type:	Recombinant Chimeric Antibody IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, IF-Tissue, IF-Cell, WB
Clone number:	PSH05-77

Description: Protein c-Fos is a proto-oncogene that is the human homolog of the retroviral oncogene v-fos. It is encoded in humans by the FOS gene. It was first discovered in rat fibroblasts as the transforming gene of the FBJ MSV (Finkel–Biskis–Jinkins murine osteogenic sarcoma virus). It is a part of a bigger Fos family of transcription factors which includes c-Fos, FosB, Fra-1 and Fra-2. It has been mapped to chromosome region 14q21→q31. c-Fos encodes a 62 kDa protein, which forms heterodimer with c-jun (part of Jun family of transcription factors), resulting in the formation of AP-1 (Activator Protein-1) complex which binds DNA at AP-1 specific sites at the promoter and enhancer regions of target genes and converts extracellular signals into changes of gene expression. It plays an important role in many cellular functions and has been found to be overexpressed in a variety of cancers.

Immunogen: Recombinant protein within human Protein c-Fos aa 1-380.

Positive control: Mouse brain tissue, rat brain tissue.

Subcellular location: Nucleus, Endoplasmic reticulum, Cytoplasm, cytosol.

Database links: SwissProt: P01100 Human | P01101 Mouse | P12841 Rat

Recommended Dilutions:

IHC-Fr	1:2,000-1:5,000
IHC-P	1:5,000
IF-Tissue	1:1,000-1:2,000
IF-Cell	1:1,000
WB	1:5,000-1:10,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

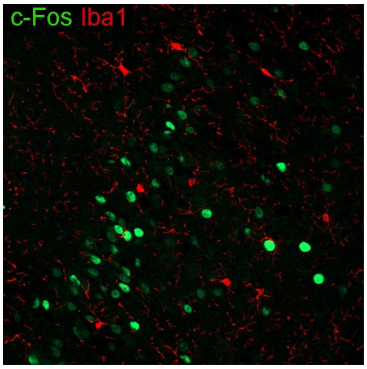

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebral cortex (restraint stress induced)

Sample: Frozen section

Antibody concentration: 1/5,000 (c-Fos, HA601373, Rat, green); 1/1,000 (Iba1, ET1705-78, Rabbit, red)

Antigen retrieval: Not required

Important Notice: Blocking buffer and antibody dilution buffer are recommended to use **TBS buffer** instead of PBS buffer.

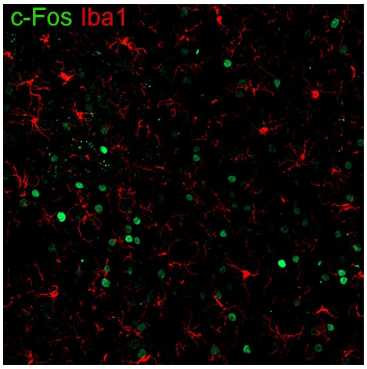

Fig2: Application: IHC-Fr

Species: Rat

Site: Cerebral cortex (restraint stress induced)

Sample: Frozen section

Antibody concentration: 1/2,000 (c-Fos, HA601373, Rat, green); 1/1,000 (Iba1, ET1705-78, Rabbit, red)

Antigen retrieval: Not required

Important Notice: Blocking buffer and antibody dilution buffer are recommended to use **TBS buffer** instead of PBS buffer.

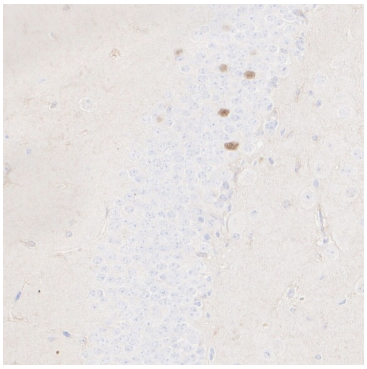

Fig3: Immunohistochemical analysis of paraffin-embedded mouse hippocampus (restraint stress induced) tissue with Rabbit anti-c-Fos antibody (HA601373) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601373) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

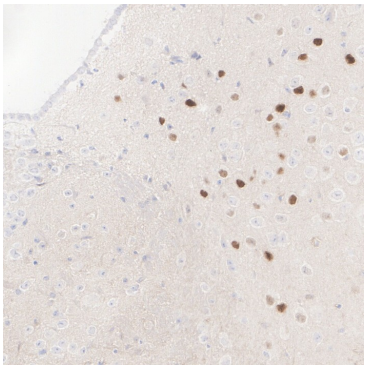

Fig4: Immunohistochemical analysis of paraffin-embedded mouse brain (restraint stress induced) tissue with Rabbit anti-c-Fos antibody (HA601373) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601373) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

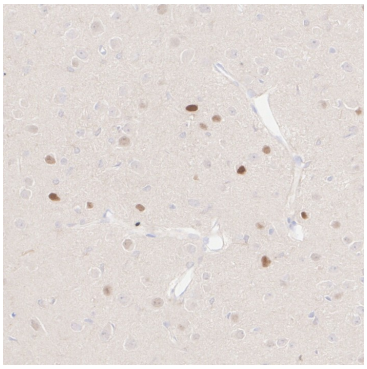

Fig5: Immunohistochemical analysis of paraffin-embedded rat brain (restraint stress induced) tissue with Rabbit anti-c-Fos antibody (HA601373) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601373) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

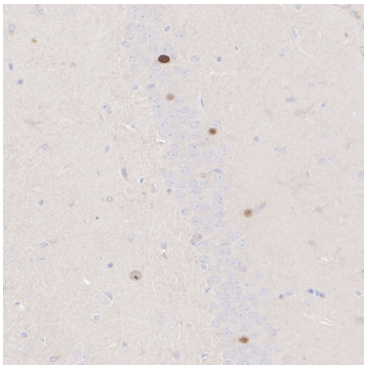

Fig6: Immunohistochemical analysis of paraffin-embedded rat hippocampus (restraint stress induced) tissue with Rabbit anti-c-Fos antibody (HA601373) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601373) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

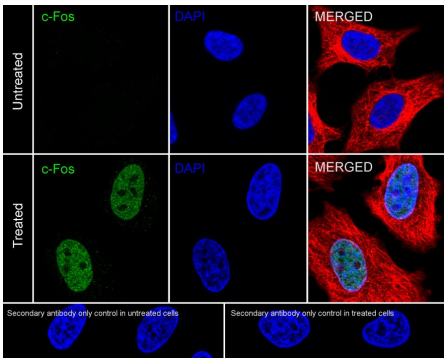

Fig7: Immunocytochemistry analysis of HeLa cells untreated / HeLa cells starved 16 hours then treated with 200nM TPA for 4 hours labeling c-Fos with Rat anti-c-Fos antibody (HA601373) at 1/1,000 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rat anti-c-Fos antibody (HA601373) at 1/1,000 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rat IgG H&L (iFluor™ 488, HA1133) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

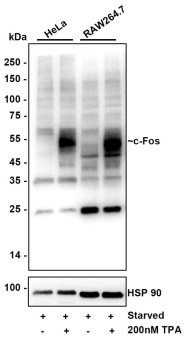

Fig8: Western blot analysis of c-Fos on different lysates with Rat anti-c-Fos antibody (HA601373) at 1/5,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: HeLa serum starved for 16 hours then add 200 nM TPA for 4 hours cell lysate
Lane 3: RAW264.7 cell lysate
Lane 4: RAW264.7 serum starved for 16 hours then add 200 nM TPA for 4 hours cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 41 kDa
Observed band size: 41-55 kDa

Exposure time: 8 seconds; ECL: K1801;

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601373) at 1/5,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Rat IgG - HRP Secondary Antibody (HA1023) at 1/10,000 dilution was used for 1 hour at room temperature.

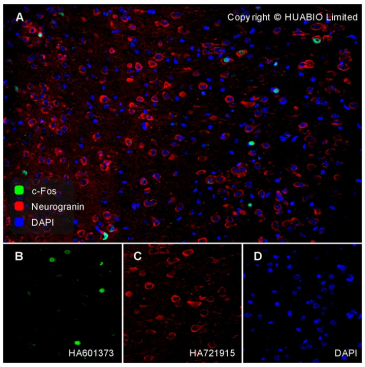

Fig9: Application: Immunofluorescence (IHC-Fr)

Species: Mouse
Tissue: Cerebral cortex (restraint stress induced)
Sample: Frozen section

Antigen retrieval: 1% SDS buffer (in PBS, pH 7.4) for 5 minutes at room temperature.

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 0.5 % Triton X-100 + 0.3 M Glycine in PBS, 10 minutes at room temperature.
Primary antibody: c-Fos, 1/5,000 (HA601373, rat, Green), Neurogranin, 1/500 (HA721915, rabbit, Red), overnight at 4℃.
Secondary antibody: Goat Anti-Rat IgG (iFluor™ 488, HA1133), Goat anti-Rabbit IgG (iFluor™ 594, HA1122), 1.5 hours at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Matsuoka K et al. Metabolic rewiring controlled by c-Fos governs cartilage integrity in osteoarthritis. Ann Rheum Dis. 2023 Sep
2. Osada N et al. c-FOS is an integral component of the IKZF1 transactivator complex and mediates lenalidomide resistance in multiple myeloma. Clin Transl Med. 2023 Aug