

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



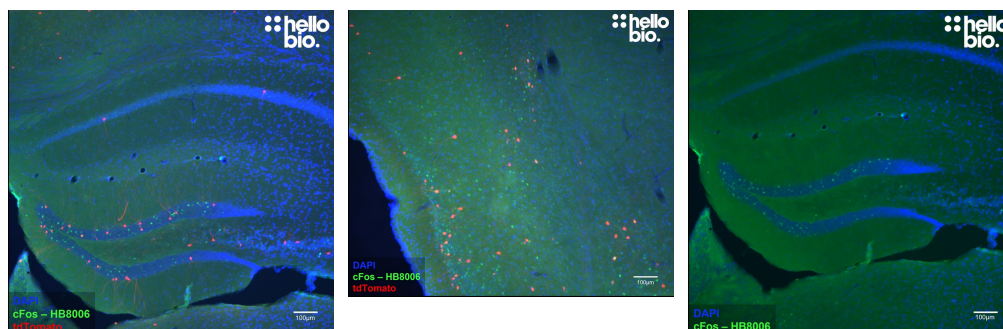
## DATASHEET

### Anti-c-Fos antibody ValidAb™

#### Product overview

<b>Name</b>	Anti-c-Fos antibody ValidAb™
<b>Cat No</b>	HB8006
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Target</b>	c-Fos
<b>Description</b>	Antibody to c-Fos - an immediate early gene used as a marker of neuronal activity. Part of the ValidAb™ range of highly validated, data-rich antibodies.

#### Validation data



#### Product information

<b>Immunogen</b>	Full length recombinant human c-Fos expressed in and purified from E. coli.
<b>Clone number</b>	2H2
<b>Isotype</b>	IgG1
<b>Purification</b>	Protein G affinity chromatography
<b>Concentration</b>	1 mg/ml
<b>Formulation</b>	50% PBS, 50% glycerol with 5mM sodium azide
<b>Predicted species reactivity</b>	Mouse, Rat, Human
<b>Tested species reactivity</b>	Mouse

#### Tested applications

<b>Applications</b>	IHC(IF)
<b>IHC(IF) optimal concentration</b>	1µg/ml (1:1000 dilution) as tested in 4% PFA fixed mouse brain tissue
<b>Product specific protocols</b>	<ul style="list-style-type: none"><li>• Due to the low stability of the c-Fos protein (around a 1hr half life) we recommend perfusion fixation for animal tissues to ensure rapid preservation of protein integrity. A protocol for this is available in <a href="#">Gage et al., 2012</a>.</li><li>• This product has only been validated in IHC(IF) using sodium citrate antigen retrieval (pH6.0, 80°C for 30 minutes) and therefore it is highly recommended that this method is used in all IHC(IF) experiments using HB8006.</li></ul>
<b>Positive control</b>	c-Fos is expressed at high levels in many cell lines (e.g. HEK293 or HeLa) when serum starved cells are stimulated with serum.
<b>Negative control</b>	Serum starved cell lines (e.g. HEK293 or HeLa) express very low levels of c-Fos.
<b>Open data link</b>	Please follow <a href="#">this link</a> to the OSF

## Target information

Other names	<ul style="list-style-type: none"><li>Fos</li><li>Cellular oncogene fos</li><li>Fos proto-oncogene, AP-1 transcription factor subunit</li><li>G0/G1 switch regulatory protein 7</li><li>Proto-oncogene c-Fos</li><li>Transcription factor AP-1 subunit c-Fos</li></ul>
UniProt ID	P01100
Gene name	FOS
NCBI full gene name	Fos proto-oncogene, AP-1 transcription factor subunit
Entrez gene ID	2353
Amino acids	380aa (40.7kDa)
Isoforms	c-Fos has three key isoforms: <ul style="list-style-type: none"><li>Isoform 1: canonical 380aa, 40.7kDa</li><li>Isoform 2: missing aa1-114, 266aa, 28.9kDa</li><li>Isoform 3: missing aa132-167, 344aa, 36.3kDa</li></ul>
Expression	Expressed widely across multiple tissues at low levels. Expression is inducible by a range of factors including cellular activity, growth factors, cytokines and tumour promoters. c-Fos is expressed in neurones where its expression is induced by activity.
Subcellular expression	c-Fos expression is localised to the nucleus
Processing	None
Post translational modifications	Subject to phosphorylation on multiple residues and also possesses multiple SUMO2 binding sites.
Homology (compared to human)	Rat and mouse show a 94.2% and 93.7% identity to human c-Fos in a BLAST search
Similar proteins	The following proteins were identified as being similar to c-Fos in a BLAST search: <ul style="list-style-type: none"><li>FosB - 73.9% identity</li><li>FRA-1 - 52.7% identity</li><li>FRA-2 - 42.9% identity</li></ul>

## Storage & Handling

Storage instructions	-20°C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

## References

### Expression of c-fos-like protein as a marker for neuronal activity following noxious stimulation in the rat.

Bullitt E (1990) The Journal of comparative neurology 296

PubMedID [2113539](#)

### Activation of c-fos in the brain.

Herrera DG et al (1996) Progress in neurobiology 50

PubMedID [8971979](#)

### c-FOS expression after hippocampal deep brain stimulation in normal rats.

da Silva JC et al (2014) Neuromodulation : journal of the International Neuromodulation Society 17

PubMedID [24118230](#)

### Decreased food anticipatory activity of obese mice relates to hypothalamic c-Fos expression.

Luna-Illades C et al (2017) Physiology & behavior 179

PubMedID [28527681](#)

### Adult social isolation leads to anxiety and spatial memory impairment: Brain activity pattern of COx and c-Fos.

Zorzo C et al (2019) Behavioural brain research 365

PubMedID [30851318](#)

