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Anti-c-Fos antibody ValidAb™

Product overview

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

Validation data



Product information

Immunogen Clone number	Full length recombinant human c-Fos expressed in and purified from E. coli. 2H2
Isotype	lgG1
Purification	Protein G affinity chromatography
Concentration	1 mg/ml
Formulation	50% PBS, 50% glycerol with 5mM sodium azide
Predicted species reactivity	Mouse, Rat, Human
Tested species reactivity	Mouse

Tested applications

Applications IHC(IF) optimal concentration Product specific protocols	 IHC(IF) 1µg/ml (1:1000 dilution) as tested in 4% PFA fixed mouse brain tissue 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 Gage et al., 2012. 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.
Positive control	c-Fos is expressed at high levels in many cell lines (e.g. HEK293 or HeLa) when serum starved cells are stimulated with serum.
Negative control Open data link	Serum starved cell lines (e.g. HEK293 or HeLa) express very low levels of c-Fos. Please follow this link to the OSF

Target information

Other names	 Fos Cellular oncogene fos Fos proto-oncogene, AP-1 transcription factor subunit G0/G1 switch regulatory protein 7 Proto-oncogene c-Fos Transcription factor AP-1 subunit c-Fos
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:
Expression Subcellular expression Target function	 Isoform 1: canonical 380aa, 40.7kDa Isoform 2: missing aa1-114, 266aa, 28.9kDa Isoform 3: missing aa132-167, 344aa, 36.3kDa 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. c-Fos expression is localised to the nucleus Associates with Jun proteins to form activator protein 1 (AP-1) complexes which are able to activate transcription of a range of genes. This process mediates the conversion of extracellular signals into changes in gene expression. cFos is also a proto-oncogene
Processing	With aberrant activation being linked to oncogenesis.
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:

- FosB 73.9% identity
- FRA-1 52.7% identity
- FRA-2 42.9% identity

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.

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

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