



Qty: 100 µg/200 µL

Mouse anti-c-Jun

Catalog No. 39-7500

Lot No.

Mouse anti-c-Jun

FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: ZC008

ISOTYPE: Mouse IgG₁-kappa

IMMUNOGEN

Recombinant protein encompassing an internal region of the human c-Jun protein, which is 96% homologous to mouse and rat

SPECIFICITY

This antibody is specific for the c-Jun (JUN, v-jun sarcoma virus 17 oncogene homolog (avian), Activator protein 1 (AP-1), p39, Proto-oncogene c-jun) protein. On Western blots, it identifies the target band at ~40 kDa.

REACTIVITY

Reactivity has been confirmed with human MDA-MB-468 and mouse NIH3T3 cell lysates. Based on amino acid sequence homology, reactivity with rat is expected.

Sample	ELISA	Western Blotting
Human	ND	+++
Mouse	ND	+++
Rat	ND	ND
Immunogen	+++	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1.0 µg/mL
Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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BACKGROUND

The c-Jun transcription factor is a basic region leucine zipper DNA-binding protein, and a member of the Jun family of proteins, which also includes c-Jun and JunB. Jun proteins can homodimerize or heterodimerize with other Jun family members, or heterodimerize with Fos family members (c-Fos, FosB, Fra-1 and Fra-2) to form the activator protein 1 transcription factor (AP-1)^{7,11,16-17,19}. The Jun family can form both heterodimers and homodimers themselves, whereas Fos family members can only heterodimerize with Jun proteins^{7-8, 10, 12, 17}. The various dimers differ in their ability to transactivate AP-1-dependent genes. JunB^{1,2,4} and JunD^{1,3,9} have been shown to be almost identical to c-Jun in their C-terminal regions, which are involved in dimerization and DNA binding, whereas their N-terminal domains, which are involved in transcriptional activation, diverge. All three form heterodimers among themselves, and with c-Fos, and other members of the *fos* gene family⁴. Homo- and heterodimers of AP-1 bind to the tetradecanoyl-13-phorbol acetate response element (TGA(G/C)TCA), which was initially identified as the phorbol ester tumor promoter response element (TRE), located within the promoters of a wide range of genes that are important for regulation of cell growth and transformation^{1,5,8,20}.

c-Jun and JunB act antagonistically to control cell transformation, differentiation, and expression of AP-1 dependent target genes³. c-Jun and JunB antagonistically control cytokine cytokine-regulated mesenchymal-epidermal interaction in skin¹⁸. Up-regulation of c-Jun has been correlated with axon regeneration after injury in multiple types of neurons²¹. Activation of the c-Jun N-terminal kinase pathway has been identified as important in pathways leading to excitotoxic and apoptotic death of dopaminergic neurons¹⁵, which contributes to neuronal pathology in Parkinson's disease¹⁶.

REFERENCES

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RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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