



Qty: 100 µg/200 µL

Mouse anti-C/EBP β

Catalog No. 415000

Lot No.

Mouse Anti-C/EBP β

FORM

This affinity-purified mouse 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: 18F8

Isotype: IgG1

IMMUNOGEN

Peptide corresponding to amino acid residues from the N-terminal region of mouse C/EBP β protein (accession # P28033, NP_034013 mouse and P21272, NP_077039 rat), which is 75% homologous with rhesus monkey and 71% homologous with human.

SPECIFICITY

This antibody is specific for the C/EBP β (CCAAT/enhancer-binding protein beta, interleukin-6-dependent-binding protein IL-6DBP, liver-enriched transcriptional activator LAP) protein. On Western Blots of mouse C/EBP β transfected 293T cell lysates, it identifies the target band at ~45 kDa.

REACTIVITY

Reactivity has been confirmed with mouse C/EBP β transfected 293T cell lysates by Western Blotting, and with mouse P388D1 cells by immunofluorescence. Based on amino acid sequence homology, reactivity with rhesus monkey and human is also expected.

Sample	Western Blotting	Immunofluorescence
Mouse	+++	+++
Rhesus monkey	ND	ND
Human	ND	ND

(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.

Western Blotting: 2 µg/mL
Immunofluorescence: 5 µg/mL

(cont')

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PI415000

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STORAGE

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

BACKGROUND

C/EBP β is one of the key transcription factors responsible for the induction of a wide array of genes, some of which play important roles in innate immunity, inflammatory response, adipocyte and myeloid cell differentiation, and the acute phase response. This member of the CCAAT/enhancer binding protein (C/EBP) family, is an important regulator of cell growth, differentiation and in promoting tumor invasiveness.¹ From a neurological standpoint, C/EBPs have been involved in the mediation of nerve growth factor, and mediation of inflammatory response in AD patient.

Three C/EBP β isoforms, LAP1, LAP2 and LIP, known to arise from differential translation initiation and display different functions in gene regulation.² Studies show a unique temporal pattern of C/EBP β isoform expression in the myeloid lineage. C/EBP beta has been detected in normal myeloid cells and in de novo human myeloid leukemias.³

C/EBP β is known to induce interleukin-6 (IL-6) gene when P388D1 cells are treated with lipopolysaccharide (LPS). IL-6 plays an important role in the acute-phase innate response, in the differentiation of B-cells and in the activation of the Th2 cell subsets, resulting in an inflammatory reaction that follows Ad-infection. Exactly how the transcriptional activities of C/EBP β isoforms are involved in the regulation of the IL-6 gene remains unclear.⁴

REFERENCES

1. Sankspal N V, et al. *Oncogene* 25:643 - 649 Short Communication, 2006.
2. Cesena TI, et al. *J Biol Chem* 282(2):956-67, 2007.
3. Scott LM, et al. *Blood* 80(7):1725-35,1992.
4. Zauberman A, et al. *J Biol Chem* 276(27):24719-25, 2001.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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