Revision 1

#8053 Store at -20C

Phospho-JunB (Thr102/Thr104) (D3C6) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	43	Rabbit IgG	#P17275	3726

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-JunB (Thr102/Thr104) (D3C6) Rabbit mAb recognizes endogenous levels of JunB protein when phosphorylated at Thr102 and/or Thr104. The antibody does not detect non-phosphorylated JunB protein.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic phosphopeptides corresponding to residues surrounding Thr102 and Thr104 of human JunB protein.

Background

JunB is a basic region, leucine zipper (bZIP) transcription factor belonging to the Jun family that includes c-Jun and JunD. Jun family members homodimerize or heterodimerize with Fos and ATF proteins to form a functional transcription factor AP-1 (activator protein 1), whose activity is regulated by a variety of physiological and pathological stimuli such as growth factors, infections, and stress signals (1-4). While JunB sometimes antagonizes c-Jun transcriptional activity, it may functionally substitute for c-Jun during development in mice (5-7). JunB regulates hematopoietic stem cell number and plays an important role in the pathogenesis of chronic myelogenous leukemia (CML) and acute myeloid leukemia (AML) (8,9).
JunB expression is selectively induced in T helper 2 (Th2) cells during T cell differentiation. JunB interacts with c-Maf, and the resulting complex functions synergistically to activate transcription of Interleukin-4 (IL-4), one of the signature cytokines secreted by Th2 cells. Transcriptional regulation of IL-4 was shown to be enhanced by JNK-mediated phosphorylation of JunB at Thr102 and Thr104 (10). Phosphorylation of these residues enhances DNA binding of the JunB/c-Maf complex at the P1 regulatory site of the IL-4 promoter, leading to Th2-restricted IL-4 expression.

Background References

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2. Shaulian, E. and Karin, M. (2002) *Nat. Cell Biol.* 4, E131-E136.
3. Hess, J. et al. (2004) *J. Cell Sci.* 117, 5965-5973.
4. Mechta-Grigoriou, F. et al. (2001) *Oncogene* 20, 2378-2389.
5. Chiu, R. et al. (1989) *Cell* 59, 979-986.
6. Schütte, J. et al. (1989) *Cell* 59, 987-997.
7. Passegué, E. et al. (2002) *Nat. Genet.* 30, 158-166.
8. Steidl, U. et al. (2006) *Nat. Genet.* 38, 1269-1277.
9. Passegué, E. et al. (2004) *Cell* 119, 431-443.
10. Li, B. et al. (1999) *EMBO J* 18, 420-32.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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