

Bcl-11B (D6F1) XP[®] Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IF-F, IF-IC, ChIP, ChIP-seq	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 120-130	Source/Isotype: Rabbit IgG	UniProt ID: #Q9C0K0	Entrez-Gene Id: 64919
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Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Frozen)	1:100
Immunofluorescence (Immunocytochemistry)	1:200
Chromatin IP	1:50
Chromatin IP-seq	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.

For a carrier free (BSA and azide free) version of this product see product #16148.

Specificity/Sensitivity

Bcl-11B (D6F1) XP[®] Rabbit mAb recognizes endogenous levels of total Bcl-11B protein.

Species predicted to react based on 100% sequence homology

Rat, Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu391 of human Bcl-11B protein.

Background

Bcl-11B (Ctip2) is a COUP-TF interacting protein that belongs to the C₂H₂ type zinc finger protein family (1). Bcl-11B is highly expressed in the brain and is critical for the development of neurons, as well as other tissues and organs. Bcl-11B also plays an essential role in T cell lineage commitment and maintenance of T cell identity (1-3). Two isoforms of Bcl-11B are found to be encoded by the *BCL11B* gene, possibly through exon-skipping (4). Bcl-11B is a transcription factor which binds to target genes through the 2nd and 3rd zinc-finger domains of exon 4 (3), while also interacting with various protein partners including COUP-TF proteins (1), the NuRD complex (5,6), HDAC1, HDAC2, and SUV39H1 (7). Research studies have shown that mutations and deletion of Bcl-11B contribute to the development of thymic lymphoma in mice and T cell acute lymphoblastic leukemia in humans, indicating a role as a tumor suppressor (4,8). Mechanistic studies have shown that Bcl-11B represses gene expression of the E3 ubiquitin ligase HDM2 in a p53-dependent manner (9).

Background References

1. Avram, D. et al. (2000) *J Biol Chem* 275, 10315-22.
2. Liu, P. et al. (2010) *Immunol Rev* 238, 138-49.
3. Kominami, R. (2012) *Proc Jpn Acad Ser B Phys Biol Sci* 88, 72-87.
4. Wakabayashi, Y. et al. (2003) *Biochem Biophys Res Commun* 301, 598-603.
5. Cismasiu, V.B. et al. (2005) *Oncogene* 24, 6753-64.
6. Topark-Ngarm, A. et al. (2006) *J Biol Chem* 281, 32272-83.
7. Marban, C. et al. (2007) *EMBO J* 26, 412-23.
8. Gutierrez, A. et al. (2011) *Blood* 118, 4169-73.
9. Obata, M. et al. (2012) *Cell Signal* 24, 1047-52.

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 **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

Cross-Reactivity Key

H: Human **M:** Mouse

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