

Bcl-11B (D6F1) XP® Rabbit mAb



- ☐ Small 100 µl
(10 western blots)
- ☐ Petite 40 µl
(4 western blots)

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #64919
 UniProt ID #Q9C0K0

Applications W, IP, IF-IC, ChIP Endogenous	Species Cross-Reactivity* H, (M, R, Mk)	Molecular Wt. 120-130 kDa	Isotype Rabbit IgG**
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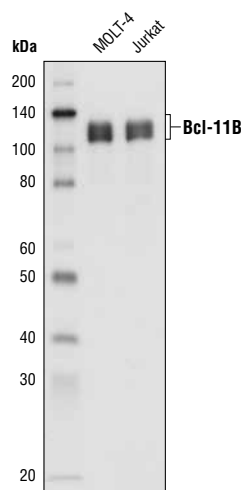
Background: Bcl-11B (Ctip2) is a COUP-TF interacting protein that belongs to the C₂H₂ type zinc finger protein family (1). Bcl-11B is highly expressed in the brain and is critical for the development of neurons, as well as other tissues and organs. Bcl-11B also plays an essential role in T cell lineage 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).

Specificity/Sensitivity: Bcl-11B (D6F1) XP® Rabbit mAb recognizes endogenous levels of total Bcl-11B protein.

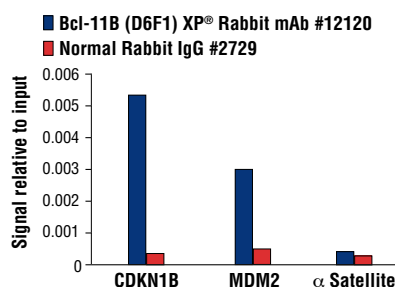
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu391 of human Bcl-11B protein.

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.



Western blot analysis of extracts from MOLT-4 and Jurkat cells using Bcl-11B (D6F1) XP® Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10⁶ Jurkat cells and either 10 µl of Bcl-11B (D6F1) XP® Rabbit mAb or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP® Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using SimpleChIP® Human CDKN1B Promoter Primers #11951, human MDM2 promoter primers, and SimpleChIP® Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

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.

***Species cross-reactivity is determined by western blot.**

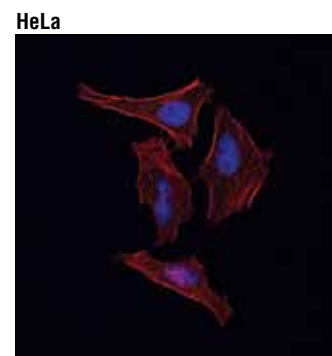
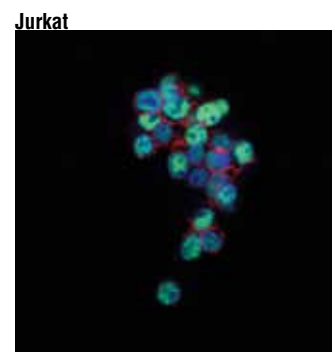
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:200
Chromatin IP	1:50

For product specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

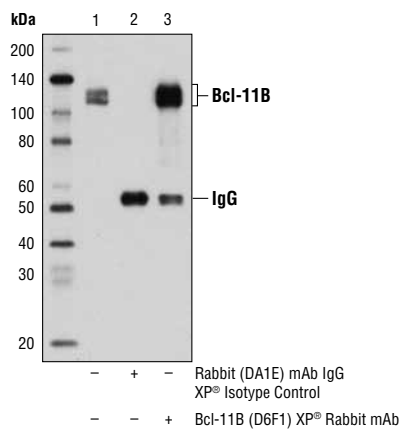


Confocal immunofluorescent analysis of Jurkat (positive; upper) and HeLa (negative; lower) cells using Bcl-11B (D6F1) XP® Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

DRAQ5 is a registered trademark of Biostatus Limited. DyLight is a trademark of Thermo Fisher Scientific Inc. and its subsidiaries. Tween is a registered trademark of ICI Americas, Inc.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunoprecipitation of Bcl-11B from MOLT-4 cell extracts, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Bcl-11B (D6F1) XP® Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using Bcl-11B (D6F1) XP® Rabbit mAb.