

# Bcl-11a (15E3AC11): sc-56012

## BACKGROUND

Bcl-11a (CtIP-1, EVI9, B cell chronic lymphocytic leukemia (CLL)/lymphoma 11A) and Bcl-11b (CtIP-2, RIT1, B cell CLL/lymphoma 11B) genes play crucial roles in lymphopoiesis and influence the progression of hematopoietic malignancies. Disruption of the Bcl-11b locus is linked to T cell acute lymphoblastic leukemia, and the loss of heterozygosity in mice results in T cell lymphoma. Bcl-11 proteins are related C2H2 zinc-finger transcription factors that act as transcriptional repressors. Bcl-11b can interact with the metastasis-associated proteins MTA1 and MTA2 through the amino-terminal region. Bcl-11a is essential for postnatal development and normal lymphopoiesis. The Bcl-11a mouse gene is a common site of retroviral integration in myeloid leukemia, and may function as a leukemia disease gene, in part, through its interaction with Bcl-6.

## REFERENCES

- Dyer, M.J., et al. 2002. The configuration of the immunoglobulin genes in B cell chronic lymphocytic leukemia. *Leukemia* 16: 973-984.
- Avram, D., et al. 2002. COUP-TF (chicken ovalbumin upstream promoter transcription factor)-interacting protein 1 (CTIP1) is a sequence-specific DNA binding protein. *Biochem. J.* 368: 555-563.
- Durum, S.K. 2003. Bcl-11: sibling rivalry in lymphoid development. *Nat. Immunol.* 4: 512-514.
- Liu, P., et al. 2003. Bcl-11a is essential for normal lymphoid development. *Nat. Immunol.* 4: 525-532.
- Nagel, S., et al. 2003. The cardiac homeobox gene NKX2-5 is deregulated by juxtaposition with Bcl-11b in pediatric T-ALL cell lines via a novel t(5;14)(q35.1;q32.2). *Cancer Res.* 63: 5329-5334.
- Togashi, T., et al. 2004. Two distinct methods analyzing chromatin structure using centrifugation and antibodies to modified Histone H3: both provide similar chromatin states of the Rit1/Bcl-11b gene. *Biochem. Biophys. Res. Commun.* 313: 489-495.
- Sakata, J., et al. 2004. Involvement of V(D)J recombinase in the generation of intragenic deletions in the Rit1/Bcl11b tumor suppressor gene in  $\gamma$ -ray-induced thymic lymphomas and in normal thymus of the mouse. *Carcinogenesis* 25: 1069-1075.
- Senawong, T., et al. 2005. Bcl-11a-dependent recruitment of SIRT1 to a promoter template in mammalian cells results in histone deacetylation and transcriptional repression. *Arch. Biochem. Biophys.* 434: 316-325.
- Arlotta, P., et al. 2005. Neuronal subtype-specific genes that control corticospinal motor neuron development *in vivo*. *Neuron* 45: 207-221.

## CHROMOSOMAL LOCATION

Genetic locus: BCL11A (human) mapping to 2p16.1; Bcl11a (mouse) mapping to 11 A3.2.

## SOURCE

Bcl-11a (15E3AC11) is a mouse monoclonal antibody raised against Bcl-11a of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>3</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Bcl-11a (15E3AC11) is recommended for detection of Bcl-11a of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Bcl-11a siRNA (h): sc-43578, Bcl-11a siRNA (m): sc-44935, Bcl-11a shRNA Plasmid (h): sc-43578-SH, Bcl-11a shRNA Plasmid (m): sc-44935-SH, Bcl-11a shRNA (h) Lentiviral Particles: sc-43578-V and Bcl-11a shRNA (m) Lentiviral Particles: sc-44935-V.

Molecular Weight of Bcl-11a XL: 125 kDa.

Molecular Weight of Bcl-11a L: 100 kDa.

Molecular Weight of Bcl-11a S: 35 kDa.

Molecular Weight of Bcl-11a XS: 25 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Ramos cell lysate: sc-2216 or GA-10 nuclear extracts.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.