

# BAALC (H-12): sc-515606

## BACKGROUND

BAALC (brain and acute leukemia, cytoplasmic) is a 180 amino acid protein that localizes to both the membrane and the cytoplasm and exists as multiple alternatively spliced isoforms. Expressed by hematopoietic and neural cells, BAALC interacts with CaMKII $\alpha$  and is thought to play a role in synaptic function at postsynaptic lipid rafts. BAALC may be overexpressed in acute myeloid leukemia (AML), suggesting a role in tumorigenesis. The gene encoding BAALC maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

## REFERENCES

1. Tanner, S.M., et al. 2001. BAALC, the human member of a novel mammalian neuroectoderm gene lineage, is implicated in hematopoiesis and acute leukemia. *Proc. Natl. Acad. Sci. USA* 98: 13901-13906.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606602. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Satoskar, A.A., et al. 2005. BAALC, a marker of mesoderm and muscle. *Gene Expr. Patterns* 5: 463-473.

## CHROMOSOMAL LOCATION

Genetic locus: BAALC (human) mapping to 8q22.3; Baalc (mouse) mapping to 15 B3.1.

## SOURCE

BAALC (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 39-56 within an internal region of BAALC of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BAALC (H-12) is available conjugated to agarose (sc-515606 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515606 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515606 PE), fluorescein (sc-515606 FITC), Alexa Fluor® 488 (sc-515606 AF488), Alexa Fluor® 546 (sc-515606 AF546), Alexa Fluor® 594 (sc-515606 AF594) or Alexa Fluor® 647 (sc-515606 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515606 AF680) or Alexa Fluor® 790 (sc-515606 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515606 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

BAALC (H-12) is recommended for detection of BAALC of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BAALC siRNA (h): sc-72595, BAALC siRNA (m): sc-72596, BAALC shRNA Plasmid (h): sc-72595-SH, BAALC shRNA Plasmid (m): sc-72596-SH, BAALC shRNA (h) Lentiviral Particles: sc-72595-V and BAALC shRNA (m) Lentiviral Particles: sc-72596-V.

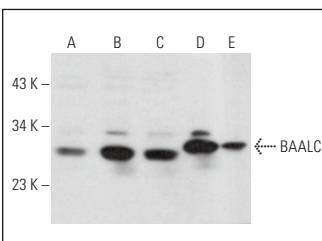
Molecular Weight of BAALC: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CCRF-CEM cell lysate: sc-2225 or SH-SY5Y cell lysate: sc-3812.

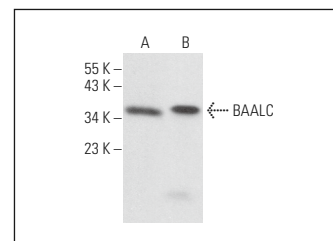
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



BAALC (H-12): sc-515606. Western blot analysis of BAALC expression in CCRF-CEM (A), HeLa (B) and SH-SY5Y (C) whole cell lysates and human brain (D) and human adrenal gland (E) tissue extracts.



BAALC (H-12): sc-515606. Western blot analysis of BAALC expression in Jurkat (A) and Neuro-2A (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Dannenmann, B., et al. 2021. iPSC modeling of stage-specific leukemogenesis reveals BAALC as a key oncogene in severe congenital neutropenia. *Cell Stem Cell* 28: 906-922.e6.

## STORAGE

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

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