

# MBLAC2 (A-4): sc-398284



The Power to Question

## BACKGROUND

MBLAC2 (metallo- $\beta$ -lactamase domain-containing protein 2), also known as  $\beta$ -lactamase-like, is a 279 amino acid protein that belongs to the glyoxalase II family and metallo- $\beta$ -lactamase superfamily. Existing as two alternatively spliced isoforms, MBLAC2 binds two zinc ions and is encoded by a gene that maps to human chromosome 5q14.3. Chromosome 5 contains 181 million base pairs and comprises nearly 6% of the human genome. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5-associated and is caused by insertions or deletions within the TCOF1 gene. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

## REFERENCES

- Dixon, M.J., et al. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. *Am. J. Hum. Genet.* 49: 17-22.
- Saltman, D.L., et al. 1993. A physical map of 15 loci on human chromosome 5q23-q33 by two-color fluorescence *in situ* hybridization. *Genomics* 16: 726-732.
- Kadmon, M., et al. 2001. Duodenal adenomatosis in familial adenomatous polyposis coli. A review of the literature and results from the Heidelberg polyposis register. *Int. J. Colorectal Dis.* 16: 63-75.
- South, S.T., et al. 2006. A new genomic mechanism leading to Cri-du-chat syndrome. *Am. J. Med. Genet. A* 140: 2714-2720.
- Aretz, S., et al. 2007. Somatic APC mosaicism: a frequent cause of familial adenomatous polyposis (FAP). *Hum. Mutat.* 28: 985-992.
- Cleaver, J.E., et al. 2007. Cockayne syndrome exhibits dysregulation of p21 and other gene products that may be independent of transcription-coupled repair. *Neuroscience* 145: 1300-1308.

## CHROMOSOMAL LOCATION

Genetic locus: MBLAC2 (human) mapping to 5q14.3; Mblac2 (mouse) mapping to 13 C3.

## SOURCE

MBLAC2 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 84-103 within an internal region of MBLAC2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398284 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

MBLAC2 (A-4) is recommended for detection of MBLAC2 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).

MBLAC2 (A-4) is also recommended for detection of MBLAC2 in additional species, including bovine and porcine.

Suitable for use as control antibody for MBLAC2 siRNA (h): sc-92045, MBLAC2 siRNA (m): sc-108869, MBLAC2 shRNA Plasmid (h): sc-92045-SH, MBLAC2 shRNA Plasmid (m): sc-108869-SH, MBLAC2 shRNA (h) Lentiviral Particles: sc-92045-V and MBLAC2 shRNA (m) Lentiviral Particles: sc-108869-V.

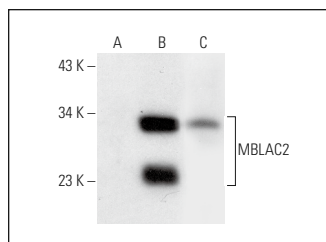
Molecular Weight of MBLAC2 isoforms: 31/22 kDa.

Positive Controls: MBLAC2 (h): 293T Lysate: sc-115432, 3611-RF whole cell lysate: sc-2215 or NIH/3T3 whole cell lysate: sc-2210.

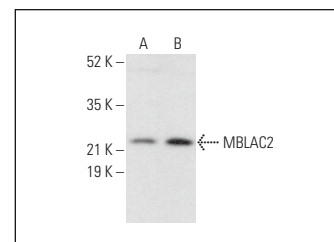
## RECOMMENDED SUPPORT REAGENTS

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



MBLAC2 (A-4): sc-398284. Western blot analysis of MBLAC2 expression in non-transfected: sc-117752 (A) and human MBLAC2 transfected: sc-115432 (B) 293T whole cell lysates and human hippocampus tissue extract (C).



MBLAC2 (A-4): sc-398284. Western blot analysis of MBLAC2 expression in NIH/3T3 (A) and 3611-RF (B) whole cell lysates.

## 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.