

HBO1 (m): 293T Lysate: sc-125432

BACKGROUND

In the cell, transcription is regulated in part by the histone modification of chromatin. Specifically, histone acetyltransferase proteins and their associated complexes function with coactivators to regulate transcription. One family of histone acetyltransferases is the MYST family of transcriptional silencers, which is linked to ORC (origin recognition complex) function. The ORC is an initiator protein for DNA replication and mediates the acetylation of chromatin to control both DNA replication and gene expression. HBO1 (histone acetyltransferase binding to ORC) is a MYST family protein that interacts with ORC1, the largest subunit of the human ORC complex. HBO1 is a nuclear protein that is highly expressed in human testis. In addition to binding ORC, HBO1 represses AR (androgen receptor)-mediated transcription by binding AR through its N-terminal transcriptional repression domain. HBO1 may play a role in regulating AR-dependent gene transcription in normal and prostate cancer cells.

REFERENCES

1. Iizuka, M. and Stillman, B. 1999. Histone acetyltransferase HBO1 interacts with the ORC1 subunit of the human initiator protein. *J. Biol. Chem.* 274: 23027-23034.
2. Sharma, M., Zarnegar, M., Li, X., Lim, B. and Sun, Z. 2000. Androgen receptor interacts with a novel MYST protein, HBO1. *J. Biol. Chem.* 275: 35200-35208.
3. Zong, H., Li, Z., Liu, L., Hong, Y., Yun, X., Jiang, J., Chi, Y., Wang, H., Shen, X., Hu, Y., Niu, Z. and Gu, J. 2005. Cyclin-dependent kinase 11(p58) interacts with HBO1 and enhances its histone acetyltransferase activity. *FEBS Lett.* 579: 3579-3588.
4. Iizuka, M., Matsui, T., Takisawa, H. and Smith, M.M. 2006. Regulation of replication licensing by acetyltransferase HBO1. *Mol. Cell. Biol.* 26: 1098-1108.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609880. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Miotto, B. and Struhl, K. 2008. HBO1 histone acetylase is a coactivator of the replication licensing factor Cdt1. *Genes Dev.* 22: 2633-2638.
7. Foy, R.L., Song, I.Y., Chitalia, V.C., Cohen, H.T., Saksouk, N., Cayrou, C., Vaziri, C., Côté, J. and Panchenko, M.V. 2008. Role of Jade-1 in the histone acetyltransferase (HAT) HBO1 complex. *J. Biol. Chem.* 283: 28817-28826.
8. Iizuka, M., Sarmiento, O.F., Sekiya, T., Scrabble, H., Allis, C.D. and Smith, M.M. 2008. HBO1 links p53-dependent stress signaling to DNA replication licensing. *Mol. Cell. Biol.* 28: 140-153.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: *Myst2* (mouse) mapping to 11 D.

PRODUCT

HBO1 (m): 293T Lysate represents a lysate of mouse HBO1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HBO1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive HBO1 antibodies. Recommended use: 10-20 µl per lane.

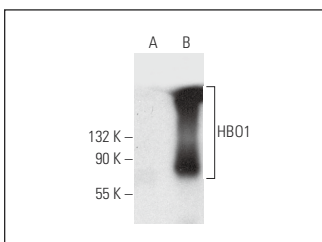
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HBO1 (G-2): sc-398346 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse HBO1 expression in HBO1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



HBO1 (G-2): sc-398346. Western blot analysis of HBO1 expression in non-transfected: sc-117752 (A) and mouse HBO1 transfected: sc-125432 (B) 293T whole cell lysates.

RESEARCH USE

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