

ETO-2 (h): 293T Lysate: sc-116819

BACKGROUND

ETO and ETO-2, which are alternatively designated MTG8 and MTG16, respectively, are members of the ETO transcription factor family. These transcription factors are characterized by a zinc-finger domain and four conserved domains, of which domain II is required for dimerization between family members. ETO and ETO-2 may function to mediate interactions between DNA binding proteins and transcriptional regulators, such as N-CoR. Frequently, the t(8;21) translocation of ETO produces the AML-1/ETO oncoprotein, which consists of the first 177 amino acids of AML-1 and all but the first 30 amino acids of ETO. AML-1/ETO expression is observed in 12-15% of acute myelogenous, M2 subtype leukemias. The AML-1/ETO fusion proteins associate with multimeric N-CoR/mSin3/HDAC1 complexes, block differentiation and induce transcriptional repression by altering chromatin remodeling.

REFERENCES

1. Erickson, P.F., et al. 1994. The ETO portion of acute myeloid leukemia t(8;21) fusion transcript encodes a highly evolutionarily conserved, putative transcription factor. *Cancer Res.* 54: 1782-1786.
2. Erickson, P.F., et al. 1996. ETO and AML-1 phosphoproteins are expressed in CD34⁺ hematopoietic progenitors: implications for t(8;21) leukemogenesis and monitoring residual disease. *Blood* 88: 1813-1823.
3. Wolford, J.K., et al. 1998. Structure and expression of the human MTG8/ETO gene. *Gene* 212: 103-109.
4. Wang, J., et al. 1998. ETO, fusion partner in t(8;21) acute myeloid leukemia, represses transcription by interaction with the human N-CoR/mSin3/HDAC1 complex. *Proc. Natl. Acad. Sci. USA* 95: 10860-10865.
5. Westendorf, J.J., et al. 1998. The t(8;21) fusion product, AML-1-ETO, associates with C/EBP α , inhibits C/EBP α -dependent transcription, and blocks granulocytic differentiation. *Mol. Cell. Biol.* 18: 322-333.
6. Davis, J.N., et al. 1999. ETO-2, a new member of the ETO-family of nuclear proteins. *Oncogene* 18: 1375-1383.
7. Wang, J., et al. 1999. Inhibitors of histone deacetylase relieve ETO-mediated repression and induce differentiation of AML-1-ETO leukemia cells. *Cancer Res.* 59: 2766-2769.
8. Ibanez, V., et al. 2004. AML-1-ETO decreases ETO-2 (MTG16) interactions with nuclear receptor corepressor, an effect that impairs granulocyte differentiation. *Cancer Res.* 64: 4547-4554.
9. Schuh, A.H., et al. 2005. ETO-2 associates with SCL in erythroid cells and megakaryocytes and provides repressor functions in erythropoiesis. *Mol. Cell. Biol.* 25: 10235-10250.

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: CBFA2T3 (human) mapping to 16q24.3.

PRODUCT

ETO-2 (h): 293T Lysate represents a lysate of human ETO-2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ETO-2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ETO-2 antibodies. Recommended use: 10-20 μ l per lane.

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

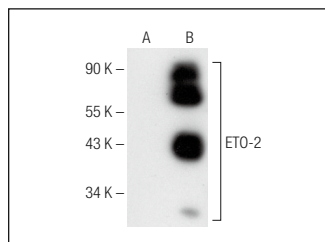
ETO-2 (C-12): sc-373691 is recommended as a positive control antibody for Western Blot analysis of enhanced human ETO-2 expression in ETO-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

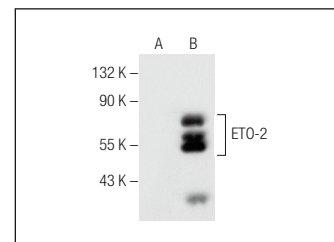
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



ETO-2 (C-12): sc-373691. Western blot analysis of ETO-2 expression in non-transfected: sc-117752 (A) and human ETO-2 transfected: sc-116819 (B) 293T whole cell lysates.



ETO-2 (G-7): sc-390332. Western blot analysis of ETO-2 expression in non-transfected: sc-117752 (A) and human ETO-2 transfected: sc-116819 (B) 293T whole cell lysates.

RESEARCH USE

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