

PE-1 (ETV3F4D10): sc-81084

BACKGROUND

PE-1 (PU-Ets related-1), also known as ETV3 (Ets translocation variant 3) or METS (mitogenic Ets transcriptional suppressor), belongs to the Ets family of transcription factors and functions as a transcriptional repressor. Ets family members share a highly conserved DNA binding domain and play a role in growth factor pathways regulating proliferation and differentiation. PE-1 is ubiquitously expressed and localizes to the nucleus. Its expression can be induced by IL-10 via the Stat3 pathway, suggesting that PE-1 contributes to the IL-10 downstream anti-inflammatory effects. During terminal cell differentiation, PE-1 plays a role in growth arrest by specifically repressing the target genes that are involved in Ras-dependent proliferation. The contributions of PE-1 to these anti-proliferative effects are heavily dependent on its interaction with Gemin3. Two PE-1 isoforms exist due to alternative splicing events.

REFERENCES

1. Klemsz, M., Hromas, R., Raskind, W., Bruno, E. and Hoffman, R. 1994. PE-1, a novel Ets oncogene family member, localizes to chromosome 1q21-q23. *Genomics* 20: 291-294.
2. de Castro, C.M., Rabe, S.M., Langdon, S.D., Fleenor, D.E., Slentz-Kesler, K., Ahmed, M.N., Qumsiyeh, M.B. and Kaufman, R.E. 1997. Genomic structure and chromosomal localization of the novel Ets factor, PE-2 (ERF). *Genomics* 42: 227-235.
3. Bidder, M., Loewy, A.P., Latifi, T., Newberry, E.P., Ferguson, G., Willis, D.M. and Towler, D.A. 2000. Ets domain transcription factor PE-1 suppresses human interstitial collagenase promoter activity by antagonizing protein-DNA interactions at a critical AP1 element. *Biochemistry* 39: 8917-8928.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 164873. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Sawka-Verhelle, D., Escoubet-Lozach, L., Fong, A.L., Hester, K.D., Herzig, S., Lebrun, P. and Glass, C.K. 2004. PE-1/METS, an antiproliferative Ets repressor factor, is induced by CREB-1/CREM-1 during macrophage differentiation. *J. Biol. Chem.* 279: 17772-17784.
6. El Kasm, K.C., Smith, A.M., Williams, L., Neale, G., Panopolous, A., Watowich, S.S., Häcker, H., Foxwell, B.M. and Murray, P.J. 2007. Cutting edge: A transcriptional repressor and corepressor induced by the STAT3-regulated anti-inflammatory signaling pathway. *J. Immunol.* 179: 7215-7219.
7. Hester, K.D., Verhelle, D., Escoubet-Lozach, L., Luna, R., Rose, D.W. and Glass, C.K. 2007. Differential repression of c-myc and cdc2 gene expression by ERF and PE-1/METS. *Cell Cycle* 6: 1594-1604.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: ETV3 (human) mapping to 1q23.1.

SOURCE

PE-1 (ETV3F4D10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of PE-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

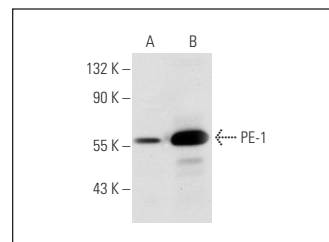
PE-1 (ETV3F4D10) is recommended for detection of PE-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PE-1 siRNA (h): sc-88114, PE-1 shRNA Plasmid (h): sc-88114-SH and PE-1 shRNA (h) Lentiviral Particles: sc-88114-V.

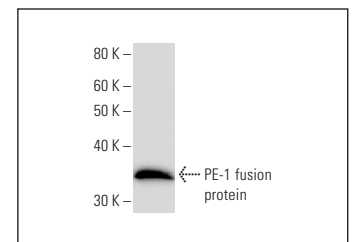
Molecular Weight of PE-1: 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HL-60 whole cell lysate: sc-2209.

DATA



PE-1 (ETV3F4D10): sc-81084. Western blot analysis of PE-1 expression in HeLa (A) and HL-60 (B) whole cell lysates.



PE-1 (ETV3F4D10): sc-81084. Western blot analysis of human recombinant PE-1 fusion protein.

PROTOCOLS

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