

## EVI5 (E-12): sc-160056

### BACKGROUND

EVI5 (ecotropic viral integration site 5 protein homolog), also known as NB4S (neuroblastoma stage 4S gene protein), is an 810 amino acid protein that contains one Rab-GAP TBC domain and exists in both monomeric and dimeric form. Localizing to the nucleus and cytoplasm, EVI5 is expressed in various cell lines, as well as in brain and adrenal tissue. EVI5 acts as an important regulator of cell cycle progression by stabilizing Emi1 and promoting cyclin-A accumulation, and may also play a role in cytokinesis. EVI5 interacts with  $\alpha$ - and  $\gamma$ -tubulin and the chromosome passenger complex (CPC), and undergoes phosphorylation and ubiquitination. EVI5 degradation during prophase is ubiquitin dependent, while phosphorylation is required for degradation during mitosis. The gene encoding EVI5 maps to human chromosome 1p22.1 and mouse chromosome 5 F. Depletion of EVI5 as a result of RNA interference results in cell cycle arrest and mitotic abnormalities. EVI5 may also be a potential at-risk gene for multiple sclerosis (MS).

### REFERENCES

1. Roberts, T., Chernova, O. and Cowell, J.K. 1998. NB4S, a member of the TBC1 domain family of genes, is truncated as a result of a constitutional t(1;10)(p22;q21) chromosome translocation in a patient with stage 4S neuroblastoma. *Hum. Mol. Genet.* 7: 1169-1178.
2. Faitar, S.L., Dabbeek, J.T., Ranalli, T.A. and Cowell, J.K. 2005. EVI5 is a novel centrosomal protein that binds to  $\alpha$ - and  $\gamma$ -tubulin. *Genomics* 86: 594-605.
3. Eldridge, A.G., Loktev, A.V., Hansen, D.V., Verschuren, E.W., Reimann, J.D. and Jackson, P.K. 2006. The *evi5* oncogene regulates cyclin accumulation by stabilizing the anaphase-promoting complex inhibitor *emi1*. *Cell* 124: 367-380.
4. Faitar, S.L., Sossey-Alaoui, K., Ranalli, T.A. and Cowell, J.K. 2006. EVI5 protein associates with the INCENP-aurora B kinase-survivin chromosomal passenger complex and is involved in the completion of cytokinesis. *Exp. Cell Res.* 312: 2325-2335.
5. Dabbeek, J.T., Faitar, S.L., Dufresne, C.P. and Cowell, J.K. 2007. The EVI5 TBC domain provides the GTPase-activating protein motif for RAB11. *Oncogene* 26: 2804-2808.
6. Jacob, B., Osato, M., Yamashita, N., Wang, C.Q., Taniuchi, I., Littman, D.R., Asou, N. and Ito, Y. 2010. Stem cell exhaustion due to Runx1 deficiency is prevented by Evi5 activation in leukemogenesis. *Blood* 115: 1610-1620.

### CHROMOSOMAL LOCATION

Genetic locus: EVI5 (human) mapping to 1p22.1; Evi5 (mouse) mapping to 5 F.

### SOURCE

EVI5 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EVI5 of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160056 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

EVI5 (E-12) is recommended for detection of EVI5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other EVI family members.

Suitable for use as control antibody for EVI5 siRNA (h): sc-78845, EVI5 siRNA (m): sc-144964, EVI5 shRNA Plasmid (h): sc-78845-SH, EVI5 shRNA Plasmid (m): sc-144964-SH, EVI5 shRNA (h) Lentiviral Particles: sc-78845-V and EVI5 shRNA (m) Lentiviral Particles: sc-144964-V.

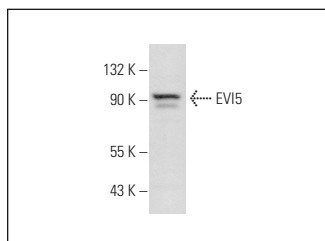
Molecular Weight of EVI5: 93 kDa.

Positive Controls: mouse brain extract: sc-2253.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



EVI5 (E-12): sc-160056. Western blot analysis of EVI5 expression in mouse brain tissue extract.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.