Vgl-1 (NQ-A1): sc-135601



The Power to Question

BACKGROUND

The transcriptional enhancer factor-1 (TEF-1) family of transcription factors regulate tissue-specific gene expression in muscle and placenta. The mechanism whereby TEF-1 confers tissue specificity depends largely on the interaction of TEF-1 with tissue-specific cofactors. Transcription cofactor vestigial-like protein 1 (VgI-1), also known as TONDU or TDU, is a TEF-1 cofactor that is critical for controlling tissue-specific gene activation of TEF-1. VgI-1 interacts with TEF-1 through a conserved sequence known as the TONDU (TDU) motif. While VgI-1 is expressed almost exclusively in placenta of adult human tissues, it is expressed more widely in human embryo tissues, including kidney, lung, skeletal muscle, heart and placenta. VgI-1 is 258 amino acids in length and localizes to the nucleus.

REFERENCES

- Vaudin, P., Delanoue, R., Davidson, I., Silber, J. and Zider, A. 1999. TONDU (TDU), a novel human protein related to the product of vestigial (Vg) gene of *Drosophila melanogaster* interacts with vertebrate TEF factors and substitutes for Vg function in wing formation. Development 126: 4807-4816.
- Maeda, T., Chapman, D.L. and Stewart, A.F. 2002. Mammalian vestigiallike 2, a cofactor of TEF-1 and MEF-2 transcription factors that promotes skeletal muscle differentiation. J. Biol. Chem. 277: 48889-48898.
- 3. Mielcarek, M., Günther, S., Krüger, M. and Braun, T. 2002. VITO-1, a novel vestigial related protein is predominantly expressed in the skeletal muscle lineage. Mech. Dev. 119: S269-S274.
- 4. Karasseva, N., Tsika, G., Ji, J., Zhang, A., Mao, X. and Tsika, R. 2003. Transcription enhancer factor 1 binds multiple muscle MEF-2 and A/T-rich elements during fast-to-slow skeletal muscle fiber type transitions. Mol. Cell. Biol. 23: 5143-5164.
- 5. Chen, H.H., Mullett, S.J. and Stewart, A.F. 2004. Vgl-4, a novel member of the vestigial-like family of transcription cofactors, regulates α_1 -adrenergic activation of gene expression in cardiac myocytes. J. Biol. Chem. 279: 30800-30806.
- 6. Mahoney, W.M., Hong, J.H., Yaffe, M.B. and Farrance, I.K. 2005. The transcriptional co-activator TAZ interacts differentially with transcriptional enhancer factor-1 (TEF-1) family members. Biochem. J. 388: 217-225.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 300583. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 8. Yoshida, T. 2008. MCAT elements and the TEF-1 family of transcription factors in muscle development and disease. Arterioscler. Thromb. Vasc. Biol. 28: 8-17.

CHROMOSOMAL LOCATION

Genetic locus: VGLL1 (human) mapping to Xq26.3.

SOURCE

Vgl-1 (NQ-A1) is a mouse monoclonal antibody raised against recombinant Vgl-1 protein of human origin.

PRODUCT

Each vial contains 100 $\mu g \; lgG_1$ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Vgl-1 (NQ-A1) is recommended for detection of Vgl-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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Vgl-1 siRNA (h): sc-91232, Vgl-1 shRNA Plasmid (h): sc-91232-SH and Vgl-1 shRNA (h) Lentiviral Particles: sc-91232-V.

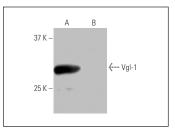
Molecular Weight of Vgl-1: 29 kDa.

Positive Controls: human Vgl-1 transfected 293T whole cell lysate or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM 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).

DATA



Vgl-1 (NQ-A1): sc-135601. Western blot analysis of Vgl-1 expression in human Vgl-1 transfected (**A**) and non-transfected (**B**) 293T 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.

PROTOCOLS

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