

Vgl-3 (Q-12): sc-100227

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 Vgl-3 (vestigial-like protein 3), also known as colon carcinoma related protein, is a 326 amino acid nuclear protein that may act as a specific coactivator for the mammalian transcription elongation factors. Both Vgl-1 and Vgl-3 are enriched in placenta, whereas Vgl-2 is expressed in differentiating somites and branchial arches during embryogenesis and is skeletal-muscle specific in adult tissues. There are two isoforms of Vgl-3 that are produced as a result of alternative splicing events.

REFERENCES

1. Maeda, T., et al. 2002. Mammalian vestigial-like 2, a cofactor of TEF-1 and MEF2 transcription factors that promotes skeletal muscle differentiation. *J. Biol. Chem.* 277: 48889-48898.
2. Chen, H.H., et al. 2004. Transcription cofactor Vgl-2 is required for skeletal muscle differentiation. *Genesis* 39: 273-279.
3. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
4. Chen, H.H., et al. 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.
5. Mann, C.J., et al. 2007. Vestigial-like-2b (VITO-1b) and Tead-3a (Tef-5a) expression in zebrafish skeletal muscle, brain and notochord. *Gene Expr. Patterns* 7: 827-836.
6. 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.
7. Mielcarek, M., et al. 2009. VITO-2, a new SID domain protein, is expressed in the myogenic lineage during early mouse embryonic development. *Gene Expr. Patterns* 9: 129-137.

CHROMOSOMAL LOCATION

Genetic locus: VGLL3 (human) mapping to 3p12.1; VglI3 (mouse) mapping to 16 C1.3.

SOURCE

Vgl-3 (Q-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Vgl-3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-100227 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Vgl-3 (Q-12) is recommended for detection of Vgl-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 family members Vgl-1, Vgl-2 or Vgl-4.

Suitable for use as control antibody for Vgl-3 siRNA (h): sc-77945, Vgl-3 siRNA (m): sc-155103, Vgl-3 shRNA Plasmid (h): sc-77945-SH, Vgl-3 shRNA Plasmid (m): sc-155103-SH, Vgl-3 shRNA (h) Lentiviral Particles: sc-77945-V and Vgl-3 shRNA (m) Lentiviral Particles: sc-155103-V.

Molecular Weight of Vgl-3: 36 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.