# TIEG2 (T-12): sc-51001



The Power to Question

#### **BACKGROUND**

Originally isolated from osteoblastic cells, the  $TGF\beta$ -inducible early gene-1 (TIEG1) is a Krüpel-like zinc finger transcription factor that regulates cellular growth and differentiation. TIEG1 is regulated as an early response gene by  $TGF\beta1$ . It is expressed in both acinar and ductular epithelial cells from exocrine pancreas and may serve as an early response gene in pancreatic cells, and overexpression of TIEG1 in  $TGF\beta$ -sensitive epithelial cells induces apoptosis. TIEG1 is expressed at high levels in PBLs, spleen and colon, and at lower levels in thymus, small intestine, ovary, prostate and skeletal muscle. The nuclear TIEG2 protein, which shares significant homology with TIEG1, was originally isolated from globin-expressing human fetal erythroid cells. TIEG2 is expressed in fetal liver, and overexpression of TIEG2 in cultured epithelial cells inhibits cellular proliferation. TIEG2 expression is upregulated by  $TGF\beta1$  and serum deprivation.

## **REFERENCES**

- Asano, H., Li, X.S. and Stamatoyannopoulos, G. 1999. FKLF, a novel Krüppellike factor that activates human embryonic and fetal β-like globin genes. Mol. Cell. Biol. 19: 3571-3579.
- Ellenrieder, V., Zhang, J.S., Kaczynski, J. and Urrutia, R. 2002. Signaling disrupts mSin3A binding to the Mad1-like Sin3-interacting domain of TIEG2, an Sp1-like repressor. EMBO J. 21: 2451-2460.
- Ou, X.M., Chen, K. and Shih, J.C. 2004. Dual functions of transcription factors, transforming growth factor-β-inducible early gene TIEG2 and Sp3, are mediated by CACCC element and Sp1 sites of human monoamine oxidase (MAO) B gene. J. Biol. Chem. 279: 21021-21028.
- 4. Blau, C.A., Barbas, C.F., Bomhoff, A.L., Neades, R., Yan, J., Navas, P.A. and Peterson, K.R. 2005.  $\gamma$ -Globin gene expression in chemical inducer of dimerization (CID)-dependent multipotential cells established from human  $\beta$ -globin locus yeast artificial chromosome ( $\beta$ -YAC) transgenic mice. J. Biol. Chem. 280: 36642-36647.
- Zhang, P., Basu, P., Redmond, L.C., Morris, P.E., Rupon, J.W., Ginder, G.D. and Lloyd, J.A. 2005. A functional screen for Krüppel-like factors that regulate the human γ-globin gene through the CACCC promoter element. Blood Cells Mol. Dis. 35: 227-235.
- Narayan, A.D., Ersek, A., Campbell, T.A., Colón, D.M., Pixley, J.S. and Zanjani, E.D. 2005. The effect of hypoxia and stem cell source on haemoglobin switching. Br. J. Haematol. 128: 562-570.
- 7. Neve, B., Fernandez-Zapico, M.E., Ashkenazi-Katalan, V., Dina, C., Hamid, Y.H., Joly, E., Vaillant, E., Benmezroua, Y., Durand, E., Bakaher, N., Delannoy, V., Vaxillaire, M., Cook, T., Dallinga-Thie, G.M., Jansen, H., Charles, M.A., Clement, K., et al. 2005. Role of transcription factor KLF11 and its diabetes-associated gene variants in pancreatic  $\beta$  cell function. Proc. Natl. Acad. Sci. USA 102: 4807-4812.

# **CHROMOSOMAL LOCATION**

Genetic locus: KLF11 (human) mapping to 2p25.1; Klf11 (mouse) mapping to 12 A1.3.

# SOURCE

TIEG2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TIEG2 of human origin.

#### **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-51001 P, ( $100 \mu g$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

TIEG2 (T-12) is recommended for detection of TIEG2 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).

TIEG2 (T-12) is also recommended for detection of TIEG2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TIEG2 siRNA (h): sc-38546, TIEG2 siRNA (m): sc-38547, TIEG2 shRNA Plasmid (h): sc-38546-SH, TIEG2 shRNA Plasmid (m): sc-38547-SH, TIEG2 shRNA (h) Lentiviral Particles: sc-38546-V and TIEG2 shRNA (m) Lentiviral Particles: sc-38547-V.

TIEG2 (T-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TIEG2: 72 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HL-60 nuclear extract: sc-2147 or EB1 cell lysate: sc-24668.

## **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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com