# SANTA CRUZ BIOTECHNOLOGY, INC.

# FNDC1 (F-14): sc-107544



## BACKGROUND

FNDC1 (fibronectin type III domain-containing protein 1), also known as MEL4B3, Ags8, expressed in synovial lining protein and activation-associated cDNA protein, is a 1,888 amino acid secreted protein that contains 5 Fibronectin type-III domains. FNDC1 is moderately expressed in skeletal muscle, pancreas, heart, kidney, spinal cord, ovary and lung. Expression of FNDC1 is induced in response to hypoxia in ventricular cardiomyocytes. Since FNDC1 interacts with  $G_\beta$  and  $G_{\gamma'}$  it is likely that FNDC1 is an activator for G protein signaling. Though normally absent in healthy skin, FNDC1 expression is induced by TGF $\beta$  signaling in skin tumors and psoriasis. There are two isoforms of FNDC1 that are produced as a result of alternative splicing events.

## REFERENCES

- Anderegg, U., Breitschwerdt, K., Köhler, M.J., Sticherling, M., Haustein, U.F., Simon, J.C. and Saalbach, A. 2005. MEL4B3, a novel mRNA is induced in skin tumors and regulated by TGFβ and pro-inflammatory cytokines. Exp. Dermatol. 14: 709-718.
- Obholz, K.L., Akopyan, A., Waymire, K.G. and MacGregor, G.R. 2006. FNDC3A is required for adhesion between spermatids and Sertoli cells. Dev. Biol. 298: 498-513.
- Sato, M., Cismowski, M.J., Toyota, E., Smrcka, A.V., Lucchesi, P.A., Chilian, W.M. and Lanier, S.M. 2006. Identification of a receptor-independent activator of G protein signaling (AGS8) in ischemic heart and its interaction with G<sub>Bv</sub>. Proc. Natl. Acad. Sci. USA 103: 797-802.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609991. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 5. Yuan, C., Sato, M., Lanier, S.M. and Smrcka, A.V. 2007. Signaling by a non-dissociated complex of G protein  $\beta\gamma$  and  $\alpha$  subunits stimulated by a receptor-independent activator of G protein signaling, AGS8. J. Biol. Chem. 282: 19938-19947.
- Carrouel, F., Couble, M.L., Vanbelle, C., Staquet, M.J., Magloire, H. and Bleicher, F. 2008. HUGO (FNDC3A): a new gene overexpressed in human odontoblasts. J. Dent. Res. 87: 131-136.
- Sato, M., Jiao, Q., Honda, T., Kurotani, R., Toyota, E., Okumura, S., Takeya, T., Minamisawa, S., Lanier, S.M. and Ishikawa, Y. 2009. Activator of G protein signaling 8 (AGS8) is required for hypoxia-induced apoptosis of cardiomyocytes: Role of G<sub>βv</sub> and connexin 43 (CX43). J. Biol. Chem. 284: 31431-31440.

### CHROMOSOMAL LOCATION

Genetic locus: FNDC1 (human) mapping to 6q25.3; Fndc1 (mouse) mapping to 17 A1.

## SOURCE

FNDC1 (F-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FNDC1 of human origin.

# **RESEARCH USE**

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-107544 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

FNDC1 (F-14) is recommended for detection of FNDC1 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 other FNDC family members.

FNDC1 (F-14) is also recommended for detection of FNDC1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for FNDC1 siRNA (h): sc-95058, FNDC1 siRNA (m): sc-145211, FNDC1 shRNA Plasmid (h): sc-95058-SH, FNDC1 shRNA Plasmid (m): sc-145211-SH, FNDC1 shRNA (h) Lentiviral Particles: sc-95058-V and FNDC1 shRNA (m) Lentiviral Particles: sc-145211-V.

Molecular Weight of FNDC1: 205 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) Immunofluo-rescence: 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, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### PROTOCOLS

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