SANTA CRUZ BIOTECHNOLOGY, INC.

FX (D-16): sc-33514

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GDP-L-fucose synthetase (FX protein), also designated Tissue-specific transplantation antigen P35B or GDP-keto-6-deoxymannose 3,5-epimerase, 4-reductase, belongs to the fucose synthetase family. FX is a red cell NADP(H)- binding protein that is important in leukocyte adhesion and trafficking processes. The 36 kDa FX protein, together with GDP-mannose 4,6-dehydratase, can convert GDP-mannose to GDP-L-fucose by catalyzing the two-step epimerase and reductase reactions. GDP-L-fucose is the substrate of several fucosyltransferases that function in the expression of many glycoconjugates such as blood group ABH antigens and developmental adhesion antigens. Defects in the gene encoding for the FX protein cause leukocyte adhesion deficiency (LAD).

REFERENCES

1. Lenzerini, L., et al. 1981. Genetic variation in the quantitative levels of an NADP (H)-binding protein (FX) in human erythrocytes. Blood 57: 209-217.
2. Camardella, L., et al. 1995. Primary structure of human erythrocyte nicotinamide adenine dinucleotide phosphate (NADP[H])-binding protein FX: identification with the mouse tum- transplantation antigen P35B. Blood 85: 264-267.
3. Sullivan, F.X., et al. 1998. Molecular cloning of human GDP-mannose 4,6-dehydratase and reconstitution of GDP-fucose biosynthesis *in vitro*. J. Biol. Chem. 273: 8193-8202.
4. Ohyama, C., et al. 1998. Molecular cloning and expression of GDP-D-mannose-4,6-dehydratase, a key enzyme for fucose metabolism defective in Lec13 cells. J. Biol. Chem. 273: 14582-14587.
5. Korner, C., et al. 1999. Decreased availability of GDP-L-fucose in a patient with LAD II with normal GDP-D-mannose dehydratase and FX protein activities. J. Leukoc. Biol. 66: 95-98.

CHROMOSOMAL LOCATION

Genetic locus: TSTA3 (human) mapping to 8q24.3; Tsta3 (mouse) mapping to 15 D3.

SOURCE

FX (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FX of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-33514 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO 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.

APPLICATIONS

FX (D-16) is recommended for detection of FX of mouse, rat and 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)], 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).

FX (D-16) is also recommended for detection of FX in additional species, including equine, canine, bovine, porcine and avian.

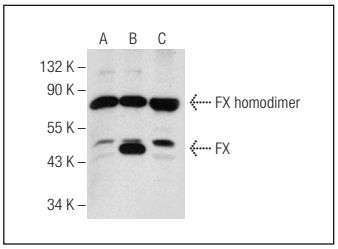
Suitable for use as control antibody for FX siRNA (h): sc-45306, FX siRNA (m): sc-45307, FX shRNA Plasmid (h): sc-45306-SH, FX shRNA Plasmid (m): sc-45307-SH, FX shRNA (h) Lentiviral Particles: sc-45306-V and FX shRNA (m) Lentiviral Particles: sc-45307-V.

Molecular Weight of FX homodimer: 68 kDa.

Molecular Weight of FX monomer: 40 kDa.

Positive Controls: FX (h): 293T Lysate: sc-370994 or HeLa whole cell lysate: sc-2200.

DATA



FX (D-16): sc-33514. Western blot analysis of FX expression in non-transfected 293T: sc-117752 (**A**), human FX transfected 293T: sc-370994 (**B**) and HeLa (**C**) whole cell lysates.

RESEARCH USE

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