# SANTA CRUZ BIOTECHNOLOGY, INC.

# Phemx (Y-16): sc-54953



## BACKGROUND

Phemx (pan-hematopoietic expression protein), also known as PHMX, TSPAN32 (tetraspanin-32) or TSSC6 (tumor-suppressing subtransferable candidate 6), is a member of the tetraspanin (TM4SF) family of proteins that may be involved in transmembrane signal transduction, regulation of cell proliferation, differentiation and motility. Phemx is a multi-pass membrane protein containing intracellular N- and C-terminal domains, four transmembrane domains and two extracellular loops. It is ubiquitously expressed from early embryogenesis through adulthood. Phemx exhibits predominant expression in hematopoietic tissues suggesting a role in hematopoietic-cell function. In association with the Integrin  $\alpha$ Ilb/Integrin  $\beta$ 3 complex, Phemx functions to stabilize arterial thrombi in platelets and regulate "outside-in" signaling. This interaction may be important in the process of wound healing. The gene encoding Phemx is located in an important tumor-suppressor gene region that has been associated with Beckwith-Wiedemann syndrome as well as a variety of cancers.

### REFERENCES

- Lee, M.P., Brandenburg, S., Landes, G.M., Adams, M., Miller, G. and Feinberg, A.P. 1999. Two novel genes in the center of the 11p15 imprinted domain escape genomic imprinting. Hum. Mol. Genet. 8: 683-690.
- Nicholson, R.H., Pantano, S., Eliason, J.F., Galy, A., Weiler, S., Kaplan, J., Hughes, M.R. and Ko, M.S. 2000. Phemx, a novel mouse gene expressed in hematopoietic cells maps to the imprinted cluster on distal chromosome 7. Genomics 68: 13-21.
- Paulsen, M., El-Maarri, O., Engemann, S., Strödicke, M., Franck, O., Davies, K., Reinhardt, R., Reik, W. and Walter, J. 2000. Sequence conservation and variability of imprinting in the Beckwith-Wiedemann syndrome gene cluster in human and mouse. Hum. Mol. Genet. 9: 1829-1841.
- 4. Harada, Y., Harada, H., Downing, J.R. and Kimura, A. 2001. A hematopoietic-specific transmembrane protein, Art-1, is possibly regulated by AML1. Biochem. Biophys. Res. Commun. 284: 714-722.
- Robb, L., Tarrant, J., Groom, J., Ibrahim, M., Li, R., Borobakas, B. and Wright, M.D. 2001. Molecular characterisation of mouse and human TSSC6: evidence that TSSC6 is a genuine member of the tetraspanin superfamily and is expressed specifically in haematopoietic organs. Biochim. Biophys. Acta 1522: 31-41.
- Tarrant, J.M., Groom, J., Metcalf, D., Li, R., Borobokas, B., Wright, M.D., Tarlinton, D. and Robb, L. 2002. The absence of Tssc6, a member of the tetraspanin superfamily, does not affect lymphoid development but enhances *in vitro* T cell proliferative responses. Mol. Cell. Biol. 22: 5006-5018.
- 7. Goschnick, M.W., Lau, L.M., Wee, J.L., Liu, Y.S., Hogarth, P.M., Robb, L.M., Hickey, M.J., Wright, M.D. and Jackson, D.E. 2006. Impaired "outside-in" Integrin  $\alpha$ IIb/ $\beta$ 3 signaling and thrombus stability in TSSC6-deficient mice. Blood 108: 1911-1918.

#### **RESEARCH USE**

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

#### CHROMOSOMAL LOCATION

Genetic locus: TSPAN32 (human) mapping to 11p15.5.

#### SOURCE

Phemx (Y-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Phemx 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-54953 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

Phemx (Y-16) is recommended for detection of Phemx of 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).

Suitable for use as control antibody for Phemx siRNA (h): sc-62798.

Molecular Weight of Phemx: 35 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-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.

#### PROTOCOLS

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