SANTA CRUZ BIOTECHNOLOGY, INC.

PL6 (38-K): sc-100652

BACKGROUND

Transmembrane proteins contain transmembrane domains that are usually characterized by α-helical structures. Transmembrane proteins exist as thermodynamically stable hetero- and homodimers that interact with the lipid bilayer and are involved in both material exchange and communication between the cell and the environment. PL6, also referred to as TMEM115 (transmembrane protein 115) or PP6 (placental protein 6), is a 351 amino acid multi-pass membrane protein that is highly expressed in kidney and skeletal muscle with lower levels of expression detected in liver, placenta, prancreas, lung, heart and brain. PL6 contains one phosphoserine residue and several transmembrane domains, suggesting that it may participate in protein exchange and signaling events between cells.

REFERENCES

1. Popot, J.L. and Engelman, D.M. 1990. Membrane protein folding and oligomerization: the two-stage model. Biochemistry 29: 4031-4037.
2. Adamian, L. and Liang, J. 2001. Helix-helix packing and interfacial pairwise interactions of residues in membrane proteins. J. Mol. Biol. 311: 891-907.
3. Engelman, D.M., et al. 2003. Membrane protein folding: beyond the two stage model. FEBS Lett. 555: 122-125.
4. Stevens, T.J., et al. 2004. Distinct protein interfaces in transmembrane domains suggest an *in vivo* folding model. Protein Sci. 13: 3028-3037.
5. Freeman-Cook, L.L. and Dimaio, D. 2005. Modulation of cell function by small transmembrane proteins modeled on the bovine papillomavirus E5 protein. Oncogene 24: 7756-7762.
6. Cao, B., et al. 2006. Enhanced recognition of protein transmembrane domains with prediction-based structural profiles. Bioinformatics 22: 303-309.
7. SWISS-PROT/TrEMBL (Q12893). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: TMEM115 (human) mapping to 3p21.31.

SOURCE

PL6 (38-K) is a mouse monoclonal antibody raised against recombinant PL6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

PL6 (38-K) is recommended for detection of PL6 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PL6 siRNA (h): sc-78005, PL6 shRNA Plasmid (h): sc-78005-SH and PL6 shRNA (h) Lentiviral Particles: sc-78005-V.

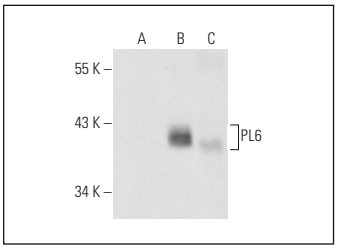
Molecular Weight of PL6: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, PL6 (h): 293T Lysate: sc-111005 or A549 cell lysate: sc-2413.

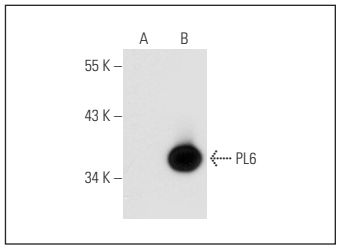
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PL6 (38-K): sc-100652. Western blot analysis of PL6 expression in non-transfected 293T: sc-117752 (**A**), human PL6 transfected 293T: sc-173883 (**B**) and Hep G2 (**C**) whole cell lysates.



PL6 (38-K): sc-100652. Western blot analysis of PL6 expression in non-transfected: sc-117752 (**A**) and human PL6 transfected: sc-111005 (**B**) 293T whole cell lysates.

RESEARCH USE

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