

PiT2 (H-113): sc-68420

BACKGROUND

The SLC20 family transport proteins were originally identified as retroviral receptors Glvr-1 and Ram-1, but are now designated sodium-dependent phosphate transporters 1 and 2 (PiT1 and PiT2). The PiT proteins function as sodium-phosphate cotransporters and are widely expressed, with high expression in bone, kidney and intestine. Both PiT1 and PiT2 are expressed on polarized epithelial cell membranes, where they play a role in cellular phosphate homeostasis. PiT2 is a human receptor for amphotropic murine leukemia virus (A-MuLV). A-MuLV infects a variety of mammalian cell lines, including humans, making it a useful tool in gene transfer technology and as a vector for gene therapy. Retroviral vector systems are used in gene therapy that are designed to infect cells expressing PiT1 or PiT2.

REFERENCES

1. Sugai, J., Eiden, M., Anderson, M.M., Van Hoeven, N., Meiering, C.D. and Overbaugh, J. 2001. Identification of envelope determinants of feline leukemia virus subgroup B that permit infection and gene transfer to cells expressing human PiT1 or PiT2. *J. Virol.* 75: 6841-6849.
2. Salaün, C., Gyan, E., Rodrigues, P. and Heard, J.M. 2002. PiT2 assemblies at the cell surface are modulated by extracellular inorganic phosphate concentration. *J. Virol.* 76: 4304-4311.
3. Bottger, P. and Pedersen, L. 2002. Two highly conserved glutamate residues critical for type III sodium-dependent phosphate transport revealed by uncoupling transport function from retroviral receptor function. *J. Biol. Chem.* 277: 42741-42747.
4. Bøttger, P. and Pedersen, L. 2004. The central half of PiT2 is not required for its function as a retroviral receptor. *J. Virol.* 78: 9564-9567.
5. Beer, C., Andersen, D.S., Rojek, A. and Pedersen, L. 2005. Caveola-dependent endocytic entry of amphotropic murine leukemia virus. *J. Virol.* 79: 10776-10787.
6. Homann, V., Rosin-Steiner, S., Stratmann, T., Arnold, W.H., Gaengler, P. and Kinne, R.K. 2005. Sodium-phosphate cotransporter in human salivary glands: molecular evidence for the involvement of NPT2b in acinar phosphate secretion and ductal phosphate reabsorption. *Arch. Oral Biol.* 50: 759-768.

CHROMOSOMAL LOCATION

Genetic locus: SLC20A2 (human) mapping to 8p11.21; Slc20a2 (mouse) mapping to 8 A2.

SOURCE

PiT2 (H-113) is a rabbit polyclonal antibody raised against amino acids 234-346 mapping within an internal region of PiT2 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.

APPLICATIONS

PiT2 (H-113) is recommended for detection of PiT2 of human and, to a lesser extent, mouse and rat 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).

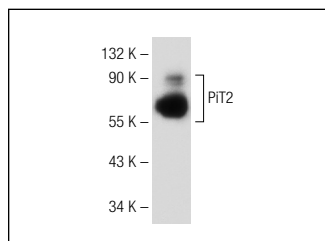
PiT2 (H-113) is also recommended for detection of PiT2 in additional species, including equine and feline.

Suitable for use as control antibody for PiT2 siRNA (h): sc-61361, PiT2 siRNA (m): sc-61362, PiT2 shRNA Plasmid (h): sc-61361-SH, PiT2 shRNA Plasmid (m): sc-61362-SH, PiT2 shRNA (h) Lentiviral Particles: sc-61361-V and PiT2 shRNA (m) Lentiviral Particles: sc-61362-V.

Molecular Weight of PiT2: 73 kDa.

Positive Controls: mouse kidney extract: sc-2255.

DATA



PiT2 (H-113): sc-68420. Western blot analysis of PiT2 expression in mouse kidney tissue extract.

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.

PROTOCOLS

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



Try **PiT2 (B-4): sc-377326**, our highly recommended monoclonal alternative to PiT2 (H-113).