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.

CHROMOSOMAL LOCATION

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

SOURCE

PiT2 (B-4) is a mouse monoclonal antibody raised against amino acids 241-340 mapping within an internal region of PiT2 of mouse origin.

PRODUCT

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

PiT2 (B-4) is available conjugated to agarose (sc-377326 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377326 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocyanin (sc-377326 PE), fluorescein (sc-377326 FITC), Alexa Fluor® 488 (sc-377326 AF488), Alexa Fluor® 546 (sc-377326 AF546), Alexa Fluor® 594 (sc-377326 AF594) or Alexa Fluor® 647 (sc-377326 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377326 AF680), Alexa Fluor® 790 (sc-377326 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

PiT2 (B-4) is recommended for detection of PiT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 PiT2 siRNA (h): sc-61361, PiT2 siRNA (m): sc-61362, PiT2 shRNA Plasmid (h): sc-61362-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: c4 whole cell lysate: sc-364186, PC-12 cell lysate: sc-2250 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HP (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). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Multiplexing Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

PiT2 (B-4) Alexa Fluor® 647: sc-377326 AF647. Direct fluorescent western blot analysis of PiT2 expression in c4 (A), Caki-1 (B), HEK293T (C), PC-12 (D) and TT (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.

PiT2 (B-4) sc-377326: Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS


STORAGE

Store at 4°C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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