

PiT1/SLC20A1 (D1Z4X) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	75-95	Rabbit IgG	#Q8WUM9	6574

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PiT1/SLC20A1(D1Z4X) Rabbit mAb recognizes endogenous levels of total PiT1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly290 of human PiT1 protein.

Background

Phosphate transporter 1 (PiT1/SLC20A1) is a sodium dependent phosphate (Pi) transporter that imports Pi into cells. PiT1 was initially identified as a receptor for retroviruses (1,2). It is widely expressed in various tissues where it plays a critical role in maintaining cellular Pi homeostasis (3,4). Phosphate transporter 1 is important in cell proliferation and tumor cell growth independent of PiT1 phosphate transport function (5). Researchers have found that PiT1 is involved in TNF-α induced apoptosis (6). Moreover, phosphate uptake via PiT1 is crucial for vascular calcification (7) and overexpression of PiT1 leads to soft tissue calcification in Werner syndrome patients (8). Additional research indicates that increased PiT1 expression is seen in calcific aortic valve disease (CAVD) tissues, and that PiT1 enhances apoptosis and mineralization by modifying Akt1 levels (9).

Background References

- O'Hara, B. et al. (1990) *Cell Growth Differ* 1, 119-27.
- Miller, D.G. et al. (1994) *Proc Natl Acad Sci U S A* 91, 78-82.
- Kavanaugh, M.P. et al. (1994) *Proc Natl Acad Sci U S A* 91, 7071-5.
- Uckert, W. et al. (1998) *Hum Gene Ther* 9, 2619-27.
- Beck, L. et al. (2009) *J Biol Chem* 284, 31363-74.
- Salaün, C. et al. (2010) *J Biol Chem* 285, 34408-18.
- Li, X. et al. (2006) *Circ Res* 98, 905-12.
- Honjo, S. et al. (2008) *Rejuvenation Res* 11, 809-19.
- El Hussein, D. et al. (2013) *PLoS One* 8, e53393.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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