

# pantophysin (T-14): sc-136792

## BACKGROUND

The MARVEL domain is a 130 amino acid motif that contains four transmembrane helices, both of which have cytoplasmic N- and C-terminal regions. MARVEL domain-containing proteins are thought to participate in tight junction regulation, the biogenesis of vesicular transport carriers and in cholesterol-rich membrane apposition events. Pantophysin, also known as SYPL1 (synaptophysin-like protein 1) or H-SP1, is a 259 amino acid multi-pass membrane protein that localizes to melanosomes and vesicles, as well as to the cytoplasm, and contains one MARVEL domain. Expressed as multiple alternatively spliced isoforms, pantophysin is present in tissues throughout the body where it may play a role in vesicle trafficking and protein transport. The gene encoding pantophysin maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES

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- Leube, R.E. 1994. Expression of the synaptophysin gene family is not restricted to neuronal and neuroendocrine differentiation in rat and human. *Differentiation* 56: 163-171.
- Haass, N.K., et al. 1996. Pantophysin is a ubiquitously expressed synaptophysin homologue and defines constitutive transport vesicles. *J. Cell Biol.* 134: 731-746.
- Windoffer, R., et al. 1999. Tissue expression of the vesicle protein pantophysin. *Cell Tissue Res.* 296: 499-510.
- Brooks, C.C., et al. 2000. Pantophysin is a phosphoprotein component of adipocyte transport vesicles and associates with Glut4-containing vesicles. *J. Biol. Chem.* 275: 2029-2036.
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## CHROMOSOMAL LOCATION

Genetic locus: SYPL1 (human) mapping to 7q22.2.

## SOURCE

pantophysin (T-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of pantophysin isoforms 1 and 2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136792 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

pantophysin (T-14) is recommended for detection of pantophysin of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for pantophysin siRNA (h): sc-89785, pantophysin shRNA Plasmid (h): sc-89785-SH and pantophysin shRNA (h) Lentiviral Particles: sc-89785-V.

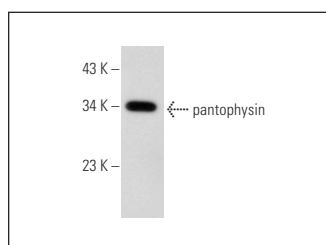
Molecular Weight of pantophysin: 28 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



pantophysin (T-14): sc-136792. Western blot analysis of pantophysin expression in HEK293 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.