BACKGROUND

The Saccharomyces cerevisiae protein, PMR1, encodes P-type calcium transport ATPase, which localizes to the Golgi and regulates the intracellular transport of calcium and manganese. The human homologue, ATP2C1 (also designated SPLA in rat), also regulates the transport of calcium in the Golgi complex and is related to other P-type ATPases family members, such as the sarco-(endoplasmic) calcium ATPase (SERCA) and the plasma membrane calcium ATPase (PMCA). PMR1 is a transmembrane protein that exists as 2 splice variants, which vary by 20 amino acids. PMR1 is mutated in Hailey-Hailey disease (HHD), which is an autosomal dominant disorder that is characterized by blisters and erosions of the skin. These findings provide further evidence that PMR1 plays a key role in maintaining the integrity of the epidermis by controlling intracellular calcium signaling.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: ATP2C1 (human) mapping to 3q22.1; Atp2c1 (mouse) mapping to 9 F1.

SOURCE

PMR1 (G-9) is a mouse monoclonal antibody raised against amino acids 720-919 of PMR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG1 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.

APPLICATIONS

PMR1 (G-9) is recommended for detection of PMR1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PMR1 siRNA (h): sc-36285, PMR1 siRNA (m): sc-36286, PMR1 shRNA Plasmid (h): sc-36285-SH, PMR1 shRNA Plasmid (m): sc-36286-SH, PMR1 shRNA (h) Lentiviral Particles: sc-36285-V and PMR1 shRNA (m) Lentiviral Particles: sc-36286-V.

Molecular Weight of PMR1: 104 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, U-87 MG cell lysate: sc-2411 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

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

DATA

PMR1 (G-9): sc-365375. Western blot analysis of PMR1 expression in HeLa (A), U-87 MG (B), F9 (C) and C6 (D) whole cell lysates.

PMR1 (G-9): sc-365375. Western blot analysis of PMR1 expression in HeLa (A) and A-431 (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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