

POH1 (SQ-17): sc-100464

BACKGROUND

POH1, the human homolog of yeast Pad1, is part of the 26S Proteasome which degrades protein targeted for destruction by the ubiquitin pathway. Specifically, POH1 is part of the 19S regulatory cap of the 26S Proteasome where it deubiquitinates proteins and allows proteins to pass through the narrow, cylindrical 26S Proteasome core. POH1 is most abundantly expressed in heart and skeletal muscle. Transient overexpression of POH1 in mammalian cells confers P-glycoprotein-independent resistance to Taxol, doxorubicin, 7-hydroxystaurosporine and ultraviolet light. The gene encoding human POH1 maps to chromosome 2q24.2. The Pad1 homolog in marine sponges (POHL) is upregulated in response to toxins Staurosporin and Taxol. In *Schistosoma mansoni*, the Pad1 homolog SmPOH appears to stabilize c-Jun and elevates the levels of c-Jun for transactivation of AP-1-responsive genes.

REFERENCES

1. Spataro, V., et al. 1997. Resistance to diverse drugs and ultraviolet light conferred by overexpression of a novel human 26S Proteasome subunit. *J. Biol. Chem.* 272: 30470-30475.
2. Krasko, A., et al. 2001. Potential multidrug resistance gene POHL: an ecologically relevant indicator in marine sponges. *Environ. Toxicol. Chem.* 20: 198-204.
3. Nabhan, J.F., et al. 2001. A *Schistosoma mansoni* Pad1 homologue stabilizes c-Jun. *Mol. Biochem. Parasitol.* 116: 209-218.

CHROMOSOMAL LOCATION

Genetic locus: PSMD14 (human) mapping to 2q24.2; Psmd14 (mouse) mapping to 2 C1.3.

SOURCE

POH1 (SQ-17) is a mouse monoclonal antibody raised against recombinant POH1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

POH1 (SQ-17) is recommended for detection of POH1 of mouse, rat and human 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).

Suitable for use as control antibody for POH1 siRNA (h): sc-106427, POH1 siRNA (m): sc-152368, POH1 shRNA Plasmid (h): sc-106427-SH, POH1 shRNA Plasmid (m): sc-152368-SH, POH1 shRNA (h) Lentiviral Particles: sc-106427-V and POH1 shRNA (m) Lentiviral Particles: sc-152368-V.

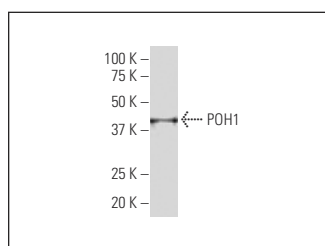
Molecular Weight of POH1: 35 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

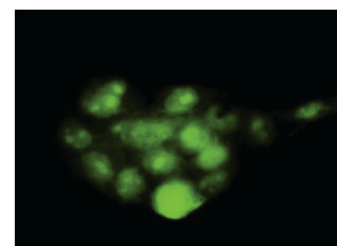
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



POH1 (SQ-17): sc-100464. Western blot analysis of POH1 expression in A-431 whole cell lysate.



POH1 (SQ-17): sc-100464. Immunofluorescence staining of paraformaldehyde-fixed A-431 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Jing, C., et al. 2021. Blockade of deubiquitinating enzyme PSMD14 overcomes chemoresistance in head and neck squamous cell carcinoma by antagonizing E2F1/Akt/SOX2-mediated stemness. *Theranostics* 11: 2655-2669.
2. Jing, C., et al. 2021. The PSMD14 inhibitor Thiolutin as a novel therapeutic approach for esophageal squamous cell carcinoma through facilitating SNAIL degradation. *Theranostics* 11: 5847-5862.

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 for detailed protocols and support products.