

# PTRH2 (O-25): sc-133935

## BACKGROUND

PTRH2 (peptidyl-tRNA hydrolase 2), also known as BIT1 (Bcl-2 inhibitor of transcription 1), is a 179 amino acid mitochondrial protein. During apoptosis, PTRH2 is released from the mitochondria to the cytoplasm. Once in the cytoplasm, PTRH2 regulates the function of two transcriptional regulators, TLE5 and TLE1, thereby promoting caspase-independent cell death. It is also believed that the natural substrate for PTRH2 may be peptidyl-tRNAs, which leave the ribosomes during protein synthesis. PTRH2 is a monomer that contains a N-terminal mitochondrial localization signal and a C-terminal UPF0099 domain.

## REFERENCES

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- Jan, Y., et al. 2004. A mitochondrial protein, Bit1, mediates apoptosis regulated by integrins and Groucho/TLE corepressors. *Cell* 116: 751-762.
- De Pereda, J.M., et al. 2004. Crystal structure of a human peptidyl-tRNA hydrolase reveals a new fold and suggests basis for a bifunctional activity. *J. Biol. Chem.* 279: 8111-8115.
- Gonzalez de Valdivia, E.I. and Isaksson, L.A. 2005. Abortive translation caused by peptidyl-tRNA drop-off at NGG codons in the early coding region of mRNA. *FEBS J.* 272: 5306-5316.
- Selvaraj, M., et al. 2006. Cloning, expression, purification, crystallization and preliminary X-ray analysis of peptidyl-tRNA hydrolase from *Mycobacterium tuberculosis*. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 62 (Pt. 9): 913-915.
- Ishii, T., et al. 2006. Yeast Pth2 is a UBL domain-binding protein that participates in the ubiquitin-proteasome pathway. *EMBO J.* 25: 5492-5503.

## CHROMOSOMAL LOCATION

Genetic locus: PTRH2 (human) mapping to 17q23.1.

## SOURCE

PTRH2 (O-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic PTRH2 peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

PTRH2 (O-25) is recommended for detection of PTRH2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PTRH2 siRNA (h): sc-76295, PTRH2 shRNA Plasmid (h): sc-76295-SH and PTRH2 shRNA (h) Lentiviral Particles: sc-76295-V.

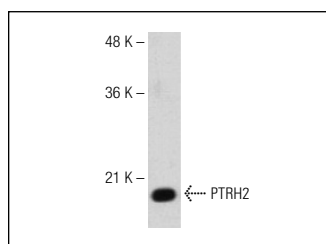
Molecular Weight of PTRH2: 20 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## 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).

## DATA



PTRH2 (O-25): sc-133935. Western blot analysis of PTRH2 expression in Jurkat whole cell lysate.

## RESEARCH USE

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