

# TPN (H-42): sc-367003

## BACKGROUND

TPN (tapasin, TPSN, TAPBP, transporter associated with antigen processing-A, TAP-A) is a type I membrane glycoprotein whose cDNA maps to chromosome 6p21 and encodes a 488 residue protein. Phosphorylation of TAP (transporter associated with antigen processing), a heterodimer consisting of TAP1 and TAP2, causes the assembly of high molecular weight complexes which contain TPN and facilitate the transfer of peptide antigens onto major histocompatibility complex (MHC) class I molecules. TPN mediates the association of newly assembled MHC class I molecules with TAP and controls antigen loading in the lumen of the endoplasmic reticulum. The cytoplasmic portion of TPN contains a double-lysine motif (-KKKAE-COOH) that is believed to mediate retention in the endoplasmic reticulum. TPN knockout mice show defects in the cell surface expression of MHC class I molecules, antigen presentation to CD8<sup>+</sup> T cells, and other humoral responses, suggesting that TPN is important for retention of empty MHC class I molecules in the ER.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: TAPBP (human) mapping to 6p21.32; Tapbp (mouse) mapping to 17 B1.

## SOURCE

TPN (H-42) is a rabbit polyclonal antibody raised against amino acids 304-345 mapping within an internal region of TPN of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

TPN (H-42) is recommended for detection of TPN 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).

TPN (H-42) is also recommended for detection of TPN in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TPN siRNA (h): sc-42986, TPN siRNA (m): sc-42987, TPN shRNA Plasmid (h): sc-42986-SH, TPN shRNA Plasmid (m): sc-42987-SH, TPN shRNA (h) Lentiviral Particles: sc-42986-V and TPN shRNA (m) Lentiviral Particles: sc-42987-V.

Molecular Weight of TPN: 48 kDa.

## 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.

## 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.