

# TAP2 (M-20): sc-11474



The Power to Question

## BACKGROUND

The transporter associated with antigen processing (TAP) is a member of the ATP binding cassette (ABC) family of transmembrane transporters and is an essential component of the major histocompatibility complex (MHC) class I antigen-presenting pathway. TAP consists of two structurally related subunits, TAP1 and TAP2, that associate into stable dimers; together they form a translocation pore for peptides in the endoplasmic reticulum (ER) membranes. The functional TAP transporter facilitates the translocation of peptides from the cytosol into the ER lumen for presentation to MHC class I molecules. Structurally, TAP1 and TAP2 contain an N-terminal transmembrane (TM) region, which together forms the TM pore, and a cytoplasmic peptide-binding pocket. In addition, the TAP transporter also contains several C-terminal nucleotide-binding domains (NBD), which bind and hydrolyze ATP and in turn, induce structural changes at the membrane to allow the passage of substrates into the ER.

## REFERENCES

1. Androlewicz, M.J., Anderson, K.S. and Cresswell, P. 1993. Evidence that transporters associated with antigen processing translocate a major histocompatibility complex class I-binding peptide into the endoplasmic reticulum in an ATP-dependent manner. *Proc. Natl. Acad. Sci. USA* 90: 9130-9134.
2. Androlewicz, M.J., Ortmann, B., van Ender, P.M., Spies, T. and Cresswell, P. 1994. Characteristics of peptide and major histocompatibility complex class I/ $\beta$ -2-Microglobulin binding to the transporters associated with antigen processing (TAP1 and TAP2). *Proc. Natl. Acad. Sci. USA* 91: 12716-12720.
3. Nijenhuis, M. and Hammerling, G.J. 1996. Multiple regions of the transporter associated with antigen processing (TAP) contribute to its peptide binding site. *J. Immunol.* 157: 5467-5477.
4. Powis, S.J. 1997. Major histocompatibility complex class I molecules interact with both subunits of the transporter associated with antigen processing, TAP1 and TAP2. *Eur. J. Immunol.* 27: 2744-2747.

## CHROMOSOMAL LOCATION

Genetic locus: Tap2 (mouse) mapping to 17 B1.

## SOURCE

TAP2 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TAP2 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11474 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

TAP2 (M-20) is recommended for detection of TAP2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 TAP2 siRNA (m): sc-42984, TAP2 shRNA Plasmid (m): sc-42984-SH and TAP2 shRNA (m) Lentiviral Particles: sc-42984-V.

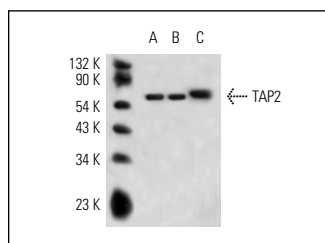
Molecular Weight of TAP2 isoforms: 76/72 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, RAW 264.7 whole cell lysate: sc-2211 or RAW 264.7 + IFN- $\gamma$  cell lysate: sc-2259.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



TAP2 (M-20): sc-11474. Western blot analysis of TAP2 expression in RAW 264.7 (A) and IFN- $\gamma$  induced RAW 264.7 (B) whole cell lysates and rat spleen tissue extract (C).

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **TAP2 (B-2): sc-515576**, our highly recommended monoclonal alternative to TAP2 (M-20).