

# TAP2 (H-210): sc-25612

## 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 and 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., et al. 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., et al. 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., et al. 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.
5. Vos, J.C., et al. 1999. Membrane topology and dimerization of the two subunits of the transporter associated with antigen processing reveal a three-domain structure. *J. Immunol.* 163: 6679-6685.
6. Knittler, M.R., et al. 1999. Nucleotide binding by TAP mediates association with peptide and release of assembled MHC class I molecules. *Curr. Biol.* 9: 999-1008.

## CHROMOSOMAL LOCATION

Genetic locus: TAP1 (human) mapping to 6p21.32; Tap1 (mouse) mapping to 17 B1.

## SOURCE

TAP2 (H-210) is a rabbit polyclonal antibody raised against amino acids 21-230 of TAP2 of human origin.

## PRODUCT

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

## APPLICATIONS

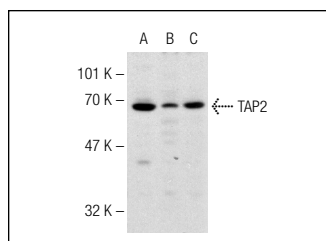
TAP2 (H-210) is recommended for detection of TAP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 (h): sc-42983, TAP2 siRNA (m): sc-42984, TAP2 shRNA Plasmid (h): sc-42983-SH, TAP2 shRNA Plasmid (m): sc-42984-SH, TAP2 shRNA (h) Lentiviral Particles: sc-42983-V and TAP2 shRNA (m) Lentiviral Particles: sc-42984-V.

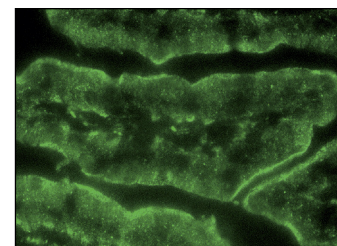
Molecular Weight of TAP2 isoforms: 76/72 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, CCRF-CEM nuclear extract: sc-2146 or MOLT-4 nuclear extract: sc-2151.

## DATA



TAP2 (H-210): sc-25612. Western blot analysis of TAP2 expression in K-562 (A), CCRF-CEM (B) and MOLT-4 (C) nuclear extracts.



TAP2 (H-210): sc-25612. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. Ito, T., et al. 2004. Collapse and restoration of MHC class-I-dependent immune privilege. *Am. J. Pathol.* 164: 623-634.
2. Leffers, N., et al. 2009. Down-regulation of proteasomal subunit MB1 is an independent predictor of improved survival in ovarian cancer. *Gynecol. Oncol.* 113: 256-263.

## 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.



Try **TAP2 (B-2): sc-515576**, our highly recommended monoclonal alternative to TAP2 (H-210).