

TAP1 (B-8): sc-376796

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.

CHROMOSOMAL LOCATION

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

SOURCE

TAP1 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 697-724 at the C-terminus of TAP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376796 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TAP1 (B-8) is recommended for detection of all TAP1 isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 TAP1 siRNA (h): sc-42981, TAP1 siRNA (m): sc-42982, TAP1 shRNA Plasmid (h): sc-42981-SH, TAP1 shRNA Plasmid (m): sc-42982-SH, TAP1 shRNA (h) Lentiviral Particles: sc-42981-V and TAP1 shRNA (m) Lentiviral Particles: sc-42982-V.

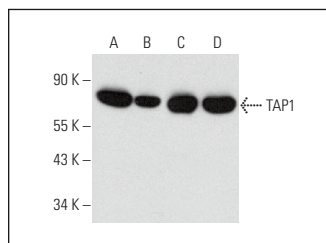
Molecular Weight of TAP1: 74 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Jurkat whole cell lysate: sc-2204 or RAW 264.7 whole cell lysate: sc-2211.

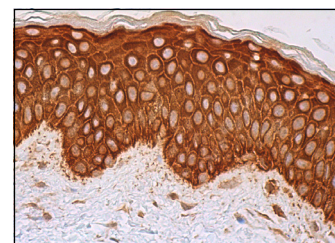
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TAP1 (B-8): sc-376796. Western blot analysis of TAP1 expression in Raji (A), Jurkat (B), RAW 264.7 (C) and WEHI-231 (D) whole cell lysates.



TAP1 (B-8): sc-376796. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes.

SELECT PRODUCT CITATIONS

1. Babaer, D., et al. 2019. Methylselenol producing selenocompounds enhance the efficiency of mammaglobin-A peptide vaccination against breast cancer cells. *Oncol. Lett.* 18: 6891-6898.
2. Ho, N.I., et al. 2021. Distinct antigen uptake receptors route to the same storage compartments for cross-presentation in dendritic cells. *Immunology* 164: 494-506.

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.