SANTA CRUZ BIOTECHNOLOGY, INC.

TAP2 (B-2): sc-515576

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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 histocompatability 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/β 2-Microglobulin binding to the transporters associated with antigen processing (TAP1 and TAP2). Proc. Natl. Acad. Sci. USA 91: 12716-12720.

CHROMOSOMAL LOCATION

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

SOURCE

TAP2 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 771-794 at the C-terminus of TAP2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TAP2 (B-2) is available conjugated to agarose (sc-515576 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515576 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515576 PE), fluorescein (sc-515576 FITC), Alexa Fluor® 488 (sc-515576 AF488), Alexa Fluor® 546 (sc-515576 AF546), Alexa Fluor® 594 (sc-515576 AF594) or Alexa Fluor® 647 (sc-515576 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515576 AF680) or Alexa Fluor® 790 (sc-515576 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515576 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

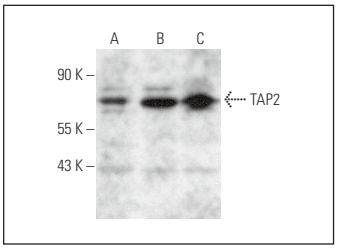
TAP2 (B-2) is recommended for detection of TAP2 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid 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, BW5147 cell lysate: sc-3800 or TK-1 whole cell lysate: sc-364798.

DATA



TAP2 (B-2): sc-515576. Western blot analysis of TAP2 expression in CTLL-2 (**A**), BW5147 (**B**) and TK-1 (**C**) whole cell lysates.

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. Caiazza, C., et al. 2022. The lack of STING impairs the MHC-I dependent antigen presentation and JAK/STAT signaling in murine macrophages. Int. J. Mol. Sci. 23: 14232.
3. Wong, C.W., et al. 2023. PARP14 inhibition restores PD-1 immune checkpoint inhibitor response following IFNγ-driven acquired resistance in preclinical cancer models. Nat. Commun. 14: 5983.
4. Azad, P., et al. 2023. Long noncoding RNA HIKER regulates erythropoiesis in Monge's disease via CSNK2B. J. Clin. Invest. 133: e165831.

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 for detailed protocols and support products.