Revision 4

Store at -20C

#12341

TAP1 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M	Endogenous	68	Rabbit	#Q03518	6890

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TAP1 Antibody recognizes endogenous levels of total TAP1 protein. This antibody cross-reacts with a 100 kDa protein of unknown origin.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val612 of mouse TAP1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

$CD8^+$ cytotoxic T cells recognize peptides presented by MHC class I molecules on the surface of infected cells and tumor cells. The transporters associated with antigen processing 1 and 2 (TAP1 and TAP2) form the TAP complex which resides on the ER membrane and transports peptides from the cytoplasm into the ER for loading onto MHC class I molecules (1-8). In addition, TAP localized to endosomal membranes is important for cross-presentation by dendritic cells (9,10). IFN-γ produced by T cells and NK cells in response to infection causes upregulation of TAP1 and TAP2, resulting in increased antigen presentation to T cells (11). Some viral proteins inhibit TAP function or downregulate TAP expression resulting in viral immune evasion (12,13). In addition, investigators have observed reduced TAP expression in a variety of tumor types, and it is thought to be one mechanism for tumor immune evasion (14).

Background References

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2. Spies, T. et al. (1990) Nature 348, 744-7.
3. Deverson, E.V. et al. (1990) Nature 348, 738-41.
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5. Spies, T. and DeMars, R. (1991) *Nature* 351, 323-4.
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8. Spies, T. et al. (1992) *Nature* 355, 644-6.
9. Huang, A.Y. et al. (1996) *Immunity* 4, 349-55.
10. Guermonprez, P. et al. (2003) *Nature* 425, 397-402.
11. Bahram, S. et al. (1991) *Proc Natl Acad Sci U S A* 88, 10094-8.
12. Früh, K. et al. (1995) *Nature* 375, 415-8.
13. Bennett, E.M. et al. (1999) *J Immunol* 162, 5049-52.
14. Steer, H.J. et al. (2010) *Oncogene* 29, 6301-13.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse

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