Revision 4

Store at -20C

#82491

MAGE-A4 (E7O1U) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P, IF-IC, FC-FP	H	Endogenous	40-50	Rabbit IgG	#P43358	4103

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:100 - 1:400
Immunofluorescence (Immunocytochemistry)	1:50 - 1:100
Flow Cytometry (Fixed/Permeabilized)	1:200 - 1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #31135.

Specificity/Sensitivity

MAGE-A4 (E7O1U) XP® Rabbit mAb recognizes endogenous levels of total MAGE-A4 protein. This antibody does not cross-react with MAGE-A2, A3, A6, A10, or A12 proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala 60 of human MAGE-A4 protein.

Background

Cancer/testis antigens (CTAs) are a family of more than 100 proteins whose normal expression is largely restricted to immune privileged germ cells of the testis, ovary, and trophoblast cells of the placenta. Although most normal somatic tissues are void of CTA expression, due to epigenetic silencing of gene expression, their expression is upregulated in a wide variety of human solid and liquid tumors (1,2). As such, CTAs have garnered much attention as attractive targets for a variety of immunotherapy-based approaches to selectively attack tumors (3).

Melanoma-associated antigen-A4 (MAGE-A4) is a cancer testis antigen that belongs to the type I MAGE family of proteins. MAGE-A4 is often overexpressed and mutated in several types of cancer (4-8). Research shows MAGE-A4 promotes aberrant cell growth by preventing p53-dependent cell cycle arrest and apoptosis in normal oral keratinocytes (9). However, MAGE-A4 was also found to interact with the liver oncoprotein gankyrin, suppressing its tumorigenic activity (10). The diverse roles of MAGE-A4 in tumor development may be dependent upon sub-cellular localization (nuclear or cytosolic) and p53 status (6). Due to its upregulated expression in human tumors and high degree of immunogenicity, MAGE-A4 has received significant attention as an immunotherapy target through the use of vaccines and adoptive cell therapy (11-14).

Background References

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11. Nagao, T. et al. (2003) *J Biol Chem* 278, 10668-74.
12. Saito, T. et al. (2014) *Vaccine* 32, 5901-7.
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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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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