Revision 5

Store at -20C

#64718

MLANA/MART-1 (E9Q4O) 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, IP, IHC-P, IF-IC, FC-FP	H	Endogenous	19	Rabbit IgG	#Q16655	2315

Product Usage Information

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

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 #73236.

Specificity/Sensitivity

MLANA/MART-1 (E9Q4O) Rabbit mAb recognizes endogenous levels of total MLANA/MART-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human MLANA/MART-1 protein.

Background

MLANA, also known as MART-1, is a member of a melanocyte lineage-specific family of proteins. It is expressed in melanocytes, retinal pigment epithelium, and melanoma cells. Its function is not entirely understood, but it is believed to be involved in the stability of GPR143, as well as the stability, trafficking, and processing of PMEL; both proteins are involved in the formation of stage II melanosomes (1). In melanosomes, MLANA is specifically located in the trans-Golgi network, however conformational changes to the protein or a sub-population of the protein causes it to localize back to the ER and small endosomal vesicles (2). In the context of melanoma cells, the conformational change is thought to be caused by aberrant exposure of epitopes, which are recognized by cytolytic T-lymphocytes (3). MLANA may be useful as a marker of metastatic melanoma (4). MHC-II restricted phospho-MLANA peptides, which are recognized by CD4 cells, are being investigated as potential candidates for cancer immunotherapy (5).

Background References

1. Hoashi, T. et al. (2005) *J Biol Chem* 280, 14006-16.
2. De Mazière, A.M. et al. (2002) *Traffic* 3, 678-93.
3. Rimoldi, D. et al. (2001) *J Biol Chem* 276, 43189-96.
4. Wandler, A. et al. (2016) *J Cutan Pathol* 43, 956-962.
5. Depontieu, F.R. et al. (2009) *Proc Natl Acad Sci U S A* 106, 12073-8.

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

Cross-Reactivity Key

H: Human

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