Revision 1

Store at -20C

#34511

MLANA/MART-1 Antibody

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	H	Endogenous	19	Rabbit	#Q16655	2315

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

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

MLANA/MART-1 Antibody recognizes endogenous levels of total MLANA/MART-1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human MLANA protein. Antibodies are purified by protein A and peptide affinity chromatography.

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

Cross-Reactivity Key

H: Human

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Limited Uses

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