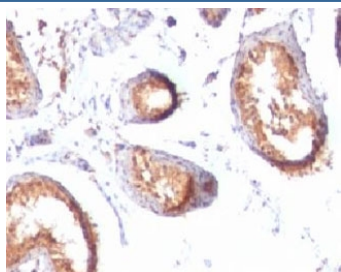


PMEL17 Antibody / Melanoma gp100 [clone MSSG95] (V7147)

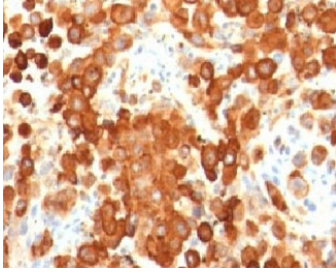
Catalog No.	Formulation	Size
V7147-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7147-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7147SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7147IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

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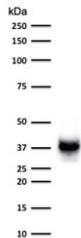
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MSSG95
Purity	Protein G affinity chromatography
UniProt	P40967
Localization	Cytoplasmic
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT (1) Prediluted IHC Only Format : incubate for 30 min at RT (2)
Limitations	This PMEL17 antibody is available for research use only.



IHC testing of FFPE human testis tissue with PMEL17 antibody (clone MSSG95). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC testing of human melanoma with PMEL17 antibody (clone MSSG95). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Western blot testing of human COLO-38 cell lysate with PMEL17 antibody (clone MSSG95). The ~100 kDa glycosylated PMEL precursor is proteolytically cleaved into an ~60-64 kDa M-alpha fragment and an ~26 kDa M-beta fragment. The M-alpha fragment is subsequently processed into ~34-38 kDa and ~26 kDa fragments that assemble into the fibrillar matrix of melanosomes.

Description

PMEL17 antibody (clone MSSG95) detects Melanocyte protein PMEL, also known as gp100 or premelanosome protein, a melanocyte-restricted glycoprotein required for the structural organization of melanosomes. The UniProt recommended name is Melanocyte protein PMEL (PMEL). gp100 plays a foundational role in pigmentation biology by assembling the internal fibrillar matrix that supports melanin synthesis and storage. This function makes PMEL17 a critical marker of melanocytic differentiation and an important focus of melanoma research.

The PMEL gene is positioned on chromosome 12q13.2 and encodes a type I transmembrane protein of roughly 100 kDa. After translation, PMEL undergoes glycosylation and proteolytic cleavage in the endoplasmic reticulum and Golgi, producing fragments that aggregate within immature melanosomes. These aggregates form amyloid-like fibrils that line the organelle interior, providing the template for melanin polymerization. The process transforms early melanosomes into the mature, pigment-laden granules characteristic of melanocytes and melanoma cells. Disruption of PMEL fibril assembly leads to altered melanosome architecture and defective pigment accumulation.

PMEL expression is governed by MITF (microphthalmia-associated transcription factor), the master regulator of melanocyte development. Its transcriptional control ensures that gp100 is produced only in pigment-forming cells such as melanocytes, retinal pigment epithelial cells, and melanomas. In normal skin, PMEL17 localizes to melanosomes within dendritic extensions of melanocytes, where pigment granules are transferred to keratinocytes. In the eye, PMEL contributes to the integrity and pigmentation of the retinal pigment epithelium. These tightly regulated expression patterns highlight PMEL17's specificity as a melanocytic lineage marker.

Clone MSSG95 is a monoclonal antibody developed for detecting PMEL17 in cells and tissue sections. It recognizes gp100 protein expressed in melanocytes and melanoma samples, offering dependable labeling of pigment cell structures. This clone provides high utility for studying pigment biosynthesis, melanosome maturation, and tumor cell differentiation. Researchers use gp100 detection to evaluate melanocytic phenotype, investigate pigment cell signaling, and support classification of melanoma subtypes.

In addition to its pigment-related role, gp100 serves as a melanoma-associated antigen that has been explored in immunological and therapeutic contexts. gp100-derived peptides can be recognized by cytotoxic T cells, making PMEL17 an important molecule for studies of immune recognition and vaccine development. Its restricted expression pattern in melanocytic tissues and tumors allows for reliable differentiation of melanoma from non-melanocytic malignancies, a distinction valuable in diagnostic and translational research.

PMEL17 antibody (clone MSSG95) is suitable for detecting gp100 expression in experimental models of pigmentation, melanoma progression, and melanocyte differentiation. NSJ Bioreagents provides PMEL17 antibody (clone MSSG95) validated for use in relevant research applications supporting studies of pigment cell biology, tumor pathology, and melanosome formation.

Application Notes

Titering of the PMEL17 antibody may be required for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human protein was used as the immunogen for the PMEL17 antibody.

Storage

Store the PMEL17 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).