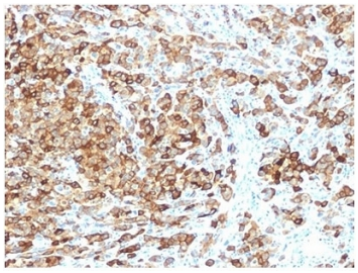
Recombinant PMEL17 Antibody / Melanoma gp100 [clone rPMEL17/6821] (V9583)

Catalog No.	Formulation	Size
V9583-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9583-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9583SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

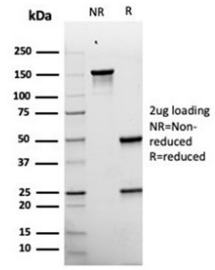
Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rPMEL17/6821
Purity	Protein A/G affinity
UniProt	P40967
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This PMEL17 antibody is available for research use only.



Immunohistochemistry analysis of PMEL17 antibody in human melanoma tissue. FFPE human melanoma sections show strong HRP-DAB brown cytoplasmic and membranous staining in tumor cells, consistent with premelanosome-associated localization of PMEL protein in melanocytic cells. Staining highlights clusters and sheets of melanoma cells, while adjacent stromal elements show minimal background signal. Heat induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, by boiling for 20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free recombinant PMEL17 antibody (clone rPMEL17/6821) as confirmation of integrity and purity.

Description

PMEL17 antibody recognizes Premelanosome protein, a melanocyte lineage-specific type I transmembrane glycoprotein encoded by the PMEL gene and commonly referred to as Melanoma gp100, SILV, Pmel17, and Silver locus protein homolog. PMEL17 is primarily localized to the membrane of early-stage melanosomes within melanocytes and melanoma cells, where it undergoes regulated proteolytic processing to form fibrillar matrix structures. As a structural component of the melanosome, PMEL17 plays a critical role in melanin deposition and pigment organelle maturation.

Recombinant PMEL17 antibody detects a heavily glycosylated protein that is synthesized in the endoplasmic reticulum, trafficked through the Golgi apparatus, and targeted to stage I and II melanosomes. Within these organelles, PMEL17 is cleaved into functional fragments that assemble into amyloid-like fibrils, providing a scaffold for eumelanin polymerization. This fibrillar matrix is essential for proper pigmentation and protects melanocytes from the cytotoxic effects of reactive melanin intermediates.

Functionally, PMEL17 is a defining marker of melanocytic differentiation. Expression is observed in normal melanocytes of the skin, uveal tract, and hair follicles, as well as in the majority of primary and metastatic melanomas. Because of its lineage-restricted expression pattern, PMEL17 is widely used in diagnostic pathology to help identify melanocytic lesions and to distinguish melanoma from non-melanocytic tumors. The protein is not broadly expressed in most non-melanocytic tissues, supporting its utility as a selective marker in research applications.

The PMEL gene is located on chromosome 12 and belongs to a small group of melanosome-associated proteins that coordinate pigment synthesis and organelle biogenesis. Disruption of PMEL processing or fibril formation can impair melanosome maturation and alter pigmentation phenotypes. In melanoma biology, PMEL17 expression reflects melanocytic lineage commitment and may vary with tumor differentiation status.

The Recombinant PMEL17 antibody (clone rPMEL17/6821) is suitable for detecting PMEL protein expression in research applications. This PMEL17 antibody supports studies of melanocyte biology, melanosome structure, pigmentation pathways, and melanoma characterization.

Application Notes

Optimal dilution of the PMEL17 antibody should be determined by the researcher.

Immunogen

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

Storage

Aliquot the PMEL17 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.