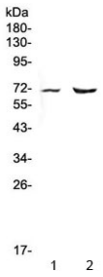
PMEL17 Antibody for Mouse and Rat / Melanoma gp100 Antibody (RQ4546)

Catalog No.	Formulation	Size
RQ4546	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P40967
Applications	0.5-1ug/ml
Limitations	This PMEL17 antibody is available for research use only.



PMEL17 Antibody for Mouse and Rat. Western blot analysis of rodent tissue lysates using PMEL17 Antibody for Mouse and Rat. Lane 1: rat heart lysate. Lane 2: mouse heart lysate. A band is detected at approximately 70 kDa, consistent with the predicted molecular weight of Premelanosome protein PMEL (also known as gp100). PMEL is synthesized as a glycosylated precursor that can migrate at higher apparent molecular weights near approximately 100 kDa due to glycosylation. The detected band in rodent samples aligns with expected expression of PMEL-derived protein species recognized by the antibody.

Description

Premelanosome protein (PMEL) is a melanocyte lineage-associated glycoprotein encoded by the PMEL gene that plays a critical role in melanosome biogenesis and pigment granule formation. The protein is widely known in the literature as gp100 or Pmel17 and functions as a structural component of developing melanosomes where it forms fibrillar matrices that support melanin deposition. PMEL17 Antibody for Mouse and Rat detects this melanocyte-associated protein and supports studies examining gp100 expression in rodent samples. The protein is frequently referred to in the literature as gp100, Pmel17, or premelanosome protein and is widely used as a melanocytic lineage marker in melanoma and pigment

cell research. In western blot studies, PMEL is synthesized as a glycosylated precursor that undergoes proteolytic processing to generate fragments that participate in formation of the fibrillar scaffold within melanosomes.

The gp100 protein belongs to a group of melanosome-associated proteins that regulate pigment granule formation in melanocytes. During early melanosome development, PMEL undergoes proteolytic cleavage and structural rearrangement to generate amyloid-like fibrils that form the internal matrix of premelanosomes. These fibrillar structures serve as the framework upon which eumelanin and pheomelanin pigments are deposited as melanogenesis proceeds. Proper organization of this matrix is essential for efficient pigment polymerization and melanosome maturation.

PMEL expression is largely restricted to melanocytes and melanocytic tumors, making gp100 one of the most widely studied melanocyte lineage markers in melanoma biology. Researchers frequently evaluate gp100 together with other melanocytic proteins such as Melan-A, tyrosinase, and MITF to characterize melanocyte differentiation and analyze melanoma tumors. Because melanomas can display heterogeneous expression of lineage markers, antibodies targeting PMEL provide valuable complementary information when examining melanocytic lesions and melanoma metastases.

The gp100 antigen has also been widely investigated in studies of melanoma immunobiology because of its strong association with pigment-producing cells. Its restricted expression pattern makes it a useful molecular marker for investigating melanocyte biology and tumor origin. Detection of gp100 expression therefore helps researchers evaluate melanocytic lineage, examine pigment cell differentiation pathways, and analyze the biology of melanoma cells in experimental models.

PMEL17 Antibody for Mouse and Rat recognizes gp100 and supports investigation of melanocyte biology in rodent research systems. By detecting this melanosome-associated structural protein, the antibody enables researchers to study pigment cell differentiation, melanosome formation, and melanoma-related pathways in mouse and rat experimental models.

Application Notes

Optimal dilution of the PMEL17 Antibody for Mouse and Rat should be determined by the researcher.

Immunogen

Amino acids KVPRNQDWLGVSRQLRTKAWNRQLYPEWTEAQRLD were used as the immunogen for the PMEL17 antibody.

Storage

After reconstitution, the PMEL17 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

gp100 antibody, Premelanosome protein antibody, Pmel17 antibody, Melanosome structural protein antibody

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