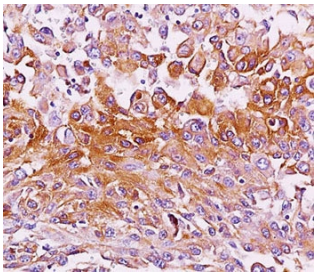
Melanoma Antibody Clone NKI-beteb / gp100 Melanoma Marker Antibody [clone NKI-beteb] (V2254)

Catalog No.	Formulation	Size
V2254-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2254-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2254SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

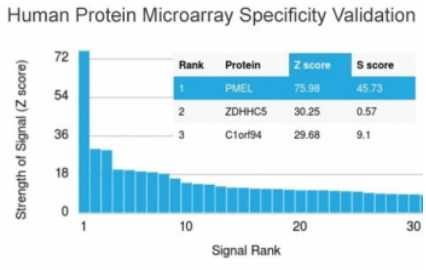
Citations (5)

Bulk quote request

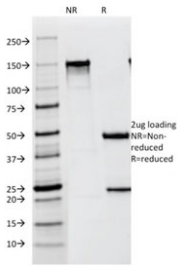
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	NKI-beteb
Purity	Protein G affinity chromatography
Gene ID	6490
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This **Melanoma gp100 antibody** is available for research use only.



Melanoma Antibody Clone NKI-beteb. Immunohistochemistry analysis of human melanoma tissue stained with Melanoma Antibody Clone NKI-beteb. Tumor cells show strong cytoplasmic and perinuclear HRP-DAB brown chromogenic staining consistent with gp100 / PMEL expression in melanoma cells. The staining highlights melanoma tumor cells within the tissue section, while surrounding non-melanocytic stromal cells remain largely negative. Heat-induced epitope retrieval was performed by boiling sections in pH 9 Tris-EDTA buffer (10mM Tris with 1mM EDTA) for 20 minutes followed by cooling prior to staining.



Melanoma Antibody Clone NKI-beteb. HuProt protein microarray specificity analysis using Melanoma Antibody Clone NKI-beteb against a protein array containing more than 19,000 full-length human proteins. The antibody shows strongest binding to PMEL (premelanosome protein), also known as gp100, with a Z score of 75.98 and an S score of 45.73, demonstrating highly specific target recognition. Z score represents the strength of signal produced when the antibody binds to a given protein on the array, expressed as standard deviations above the mean signal of all proteins on the array. The S score represents the difference between adjacent Z scores when proteins are ranked by signal intensity and therefore reflects the relative specificity of the antibody for its intended target. The results demonstrate that Clone NKI-beteb selectively recognizes PMEL with strong specificity compared with other proteins present on the HuProt protein microarray.



SDS-PAGE analysis of purified, BSA-free Melanoma Antibody Clone NKI-beteb as confirmation of integrity and purity.

Description

Premelanosome protein (PMEL) is a melanocyte lineage-specific glycoprotein encoded by the PMEL gene and plays a central role in melanosome biogenesis and pigment formation within melanocytes. This structural protein forms fibrillar matrices inside developing melanosomes that support the deposition and organization of melanin. Expression of PMEL is highly enriched in melanocytes and melanocytic tumors, making it a widely used biomarker in dermatopathology and melanoma research. The protein is also commonly referred to as gp100, Pmel17, or silver locus protein and is a hallmark component of the melanosome maturation pathway that regulates pigmentation and melanin polymerization.

Melanoma Antibody Clone NKI-beteb recognizes the melanocytic differentiation antigen gp100 and is one of the most widely cited monoclonal antibodies used for melanoma detection and research. Because this antibody clone targets an established melanosomal protein associated with pigment-producing cells, it has become a key reagent for identifying melanocytic lineage in both benign melanocytes and malignant melanoma cells. The strong literature presence of Clone NKI-beteb has contributed to its broad adoption in melanoma biology studies and diagnostic pathology research where reliable detection of melanocyte-associated antigens is required.

The gp100 protein itself is synthesized as a type I transmembrane glycoprotein that undergoes complex proteolytic processing within melanosomes to generate structural fibrils essential for melanin deposition. These fibrils provide a scaffold that allows eumelanin and pheomelanin polymers to accumulate efficiently during melanosome maturation. The proper formation of this fibrillar matrix is critical for normal pigmentation, and disruption of PMEL function can impair melanosome structure and pigment synthesis. In melanocytic cells, gp100 localizes primarily to premelanosomes and early stage melanosomes where it contributes to the architecture of pigment granules.

PMEL expression is largely restricted to melanocytes, retinal pigment epithelial cells, and melanocytic tumors, providing strong specificity as a melanocytic lineage marker. In melanoma biology, gp100 is frequently studied alongside other melanocyte differentiation markers such as Melan-A, tyrosinase, and MITF to evaluate tumor origin, melanocytic differentiation status, and tumor heterogeneity. Because melanoma can display variable expression of lineage markers, antibodies directed against gp100 provide valuable complementary information when evaluating melanocytic lesions or melanoma metastases.

Melanoma Antibody Clone NKI-beteb has become particularly well known in the literature due to its extensive use in

studies investigating melanoma cell biology, melanocyte differentiation, and melanosome structure. The antibody recognizes gp100 present in pigment-producing cells and melanoma tissues, enabling researchers to characterize melanocytic tumors and analyze melanocyte lineage markers in normal and malignant contexts. The widespread publication record of Clone NKI-beteb reflects its long-standing role as a reliable melanoma-associated antibody used in numerous research studies investigating melanocyte biology, melanoma progression, and tumor pathology.

Because gp100 is closely associated with melanosome maturation and pigment cell differentiation, antibodies against this antigen are frequently used to examine melanocytic cell identity and to distinguish melanoma from non-melanocytic tumors. The presence of gp100 in melanoma cells has also made it an important antigen in studies of melanoma immunobiology and tumor antigen recognition. As a result, Melanoma Antibody Clone NKI-beteb continues to serve as a widely referenced reagent in melanoma research and melanocyte lineage analysis.

Application Notes

Differences in protocols and secondaries may require the Melanoma Antibody Clone NKI-beteb to be titered up or down for optimal performance.

Immunogen

Membranes from a human melanoma metastasis were used as the immunogen for this Melanoma antibody (gp100).

Storage

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

Alternate Names

gp100 antibody, PMEL antibody, Melanocyte protein antibody, Silver locus protein antibody

References (1)