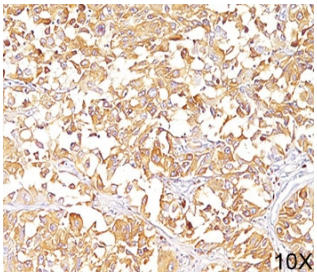
Gp100 Antibody [clone HMB45] (V2253)

Catalog No.	Formulation	Size
V2253-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2253-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20
V2253SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100
V2253IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7

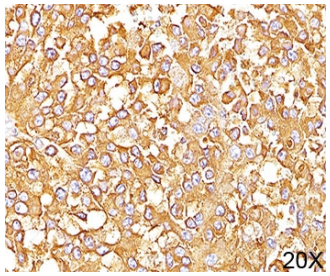
Citations (11)

Bulk quote request

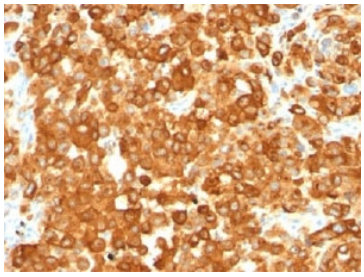
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HMB45
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	6490
Localization	Cytoplasmic
Applications	Western Blot : 1-2ug/ml Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 0.5-1ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT (1)
Limitations	This **gp100 antibody** is available for research use only.



IHC staining of human melanoma (10X) with gp100 antibody (clone HMB45). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of human melanoma (20X) with gp100 antibody (clone HMB45). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



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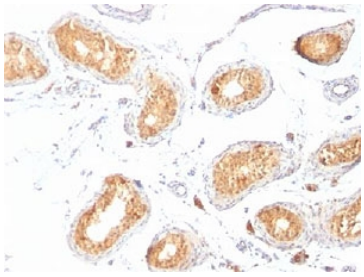
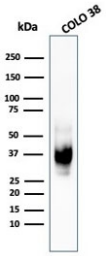
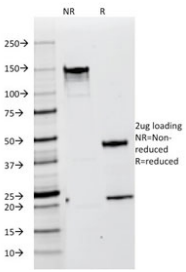


IHC staining of testis with gp100 antibody (clone HMB45). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Western blot testing of human COLO-38 cell lysate with recombinant gp100 antibody (clone PMEL/1825R).



SDS-PAGE analysis of purified, BSA-free gp100 antibody (clone HMB45) as confirmation of integrity and purity.

Description

Gp100 antibody clone HMB45 is a monoclonal antibody that recognizes gp100, also known as premelanosome protein or PMEL, a structural protein involved in melanosome biogenesis and pigmentation. gp100 is expressed in melanocytes and melanomas, where it contributes to fibril formation within melanosomes that serve as scaffolds for melanin deposition. Because of its selective expression in melanocytic lineages, gp100 antibody clone HMB45 is widely used in dermatopathology and melanoma research. NSJ Bioreagents provides this antibody as a trusted reagent for identifying melanocytes, characterizing pigmented lesions, and studying melanoma biology.

Gp100 antibody clone HMB45 produces distinct cytoplasmic staining in melanocytes and melanoma cells. It is particularly valuable in pathology for confirming the melanocytic origin of tumors. When used alongside other markers such as Melan-A and S100, clone HMB45 helps pathologists differentiate melanoma from non melanocytic malignancies, including carcinomas and sarcomas. Its high specificity for gp100 makes it an essential antibody in diagnostic immunohistochemistry.

In melanoma research, gp100 antibody clone HMB45 is used to investigate tumor progression, antigen presentation, and immune responses. gp100 serves as a melanoma associated antigen recognized by cytotoxic T lymphocytes, making it a target of immunotherapy approaches. Clone HMB45 has been employed in studies evaluating gp100 based vaccines and adoptive T cell therapies, where gp100 expression serves as both a diagnostic marker and a therapeutic target.

Gp100 antibody clone HMB45 also provides insight into pigment cell biology. Its detection reveals melanosome maturation stages, making it useful in studies of pigmentation disorders and melanocyte differentiation. Research into diseases such as vitiligo and albinism has benefited from the use of this antibody to evaluate alterations in melanosome structure and protein expression.

Technically, clone HMB45 is validated across tissue based and cell based applications, producing strong and reproducible signals. Its long publication history highlights its reliability in melanoma pathology, pigment biology, and immunology. Alternate names include PMEL antibody, premelanosome protein antibody, melanoma gp100 antigen antibody, and silver locus protein antibody.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the gp100 antibody to be titered up or down 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

The extract of pigmented melanoma metastases from lymph nodes was used as the immunogen for this gp100 antibody.

Storage

Store the gp100 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

References (2)