abcam

Product datasheet

Anti-Melanoma gp100 antibody [HMB45] ab787

3 Abreviews 36 References 5 Images

Overview

Product name	Anti-Melanoma gp100 antibody [HMB45]
Description	Mouse monoclonal [HMB45] to Melanoma gp100
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Human **Does not react with:** Rat, Dog
Immunogen	Tissue, cells or virus corresponding to Human Melanoma. BALB/C mice were injected with extract of pigmented malanoma metastases from lymph nodes. Database link: **P40967**
Positive control	IHC-P: Human melanoma and testis tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: Tissue culture supernatant, 0.05% BSA
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	HMB45
Isotype	IgG1

Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab787 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

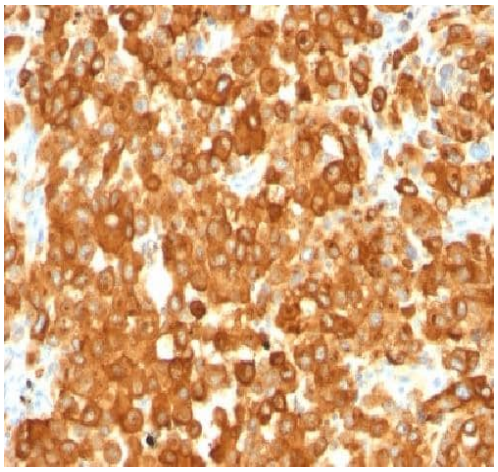
Application	Abreviews	Notes
Flow Cyt		1/10. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF		Use at an assay dependent concentration. PubMed: 19841138
IHC-P	★★★★☆ (2)	Use a concentration of 0.5 - 1 µg/ml. Incubate for 30 minutes at room temperature. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes

Target

Function	Plays a central role in the biogenesis of melanosomes. Involved in the maturation of melanosomes from stage I to II. The transition from stage I melanosomes to stage II melanosomes involves an elongation of the vesicle, and the appearance within of distinct fibrillar structures. Release of the soluble form, ME20-S, could protect tumor cells from antibody mediated immunity.
Tissue specificity	Preferentially expressed in melanomas. Some expression was found in dysplastic nevi. Not found in normal tissues nor in carcinomas. Normally expressed at low levels in quiescent adult melanocytes but overexpressed by proliferating neonatal melanocytes and during tumor growth.
Sequence similarities	Belongs to the PMEL/NMB family. Contains 1 PKD domain.
Domain	The RPT domain is essential for the generation of the fibrillar matrix of melanosomes. The lumenal domain is necessary for correct processing and trafficking to melanosomes.
Post-translational modifications	A small amount of P1/P100 (major form) undergoes glycosylation to yield P2/P120 (minor form). P2 is cleaved by a furin-like proprotein convertase (PC) in a pH-dependent manner in a post-Golgi, prelysosomal compartment into two disulfide-linked subunits: a large lumenal subunit, M-alpha/ME20-S, and an integral membrane subunit, M-beta. Despite cleavage, only a small fraction of M-alpha is secreted, whereas most M-alpha and M-beta remain associated with each other intracellularly. M-alpha is further processed to M-alpha N and M-alpha C. M-alpha C further undergoes processing to yield M-alpha C1 and M-alpha C3 (M-alpha C2 in the case of PMEL17-is or PMEL17-ls). Formation of intralumenal fibrils in the melanosomes requires the formation of M-alpha that becomes incorporated into the fibrils. Stage II melanosomes harbor only Golgi-modified Pmel17 fragments that are derived from M-alpha and that bear sialylated O-linked oligosaccharides. N-glycosylated. O-glycosylated; contains sialic acid.
Cellular localization	Secreted and Endoplasmic reticulum membrane. Golgi apparatus. Melanosome. Endosome > multivesicular body. Identified by mass spectrometry in melanosome fractions from stage I to

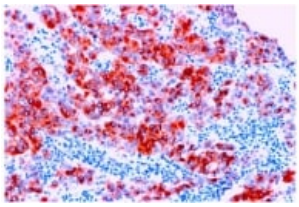
stage IV. Localizes predominantly to intralumenal vesicles (ILVs) within multivesicular bodies. Associates with ILVs found within the lumen of premelanosomes and melanosomes and particularly in compartments that serve as precursors to the striated stage II premelanosomes.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Melanoma gp100 antibody [HMB45] (ab787)

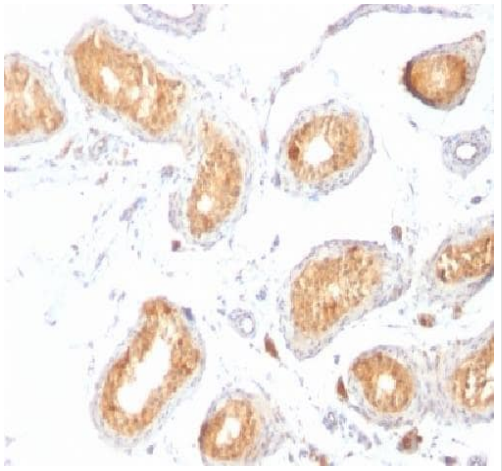
Formalin-fixed, paraffin-embedded human melanoma tissue stained with ab787 at 1 µg/ml in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Melanoma gp100 antibody [HMB45] (ab787)

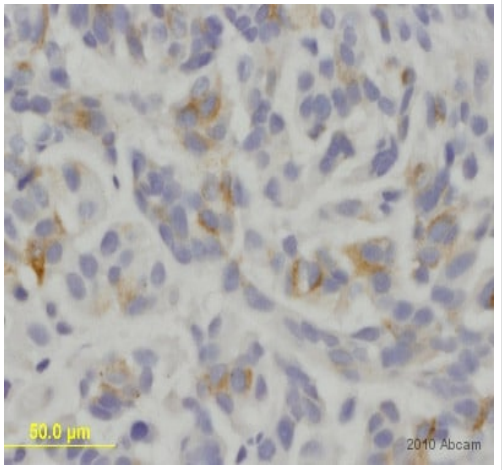
ab787 - immunohistochemistry

Formalin fixed paraffin embedded human melanoma stained with ab787, using ABC and AEC chromogen.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Melanoma gp100 antibody [HMB45] (ab787)

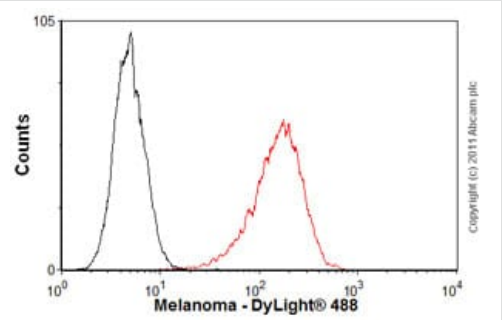
Formalin-fixed, paraffin-embedded human testis tissue stained with ab787 at 1 µg/ml in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Melanoma gp100 antibody [HMB45] (ab787)

This image is courtesy of an Abreview submitted by Dr. Hongwei Shao

ab787 staining Melanoma in the human Melanoma cell line WM3248 xenopraph by IHC-P (formaldehyde-fixed paraffin-embedded sections). Tissue samples were fixed with formaldehyde; permeabilized with 0.1% Triton X-100 and blocked with 100% Dakocytomation X0909 for 1 hour at room temperature; antigen retrival was by heat mediation in Citric buffer (pH6). The sample was incubated with primary antibody (1/25) at 4°C for 18 hours. An HRP-conjugated Goat polyclonal to mouse IgG (1/100) was used as secondary antibody.



Flow Cytometry - Anti-Melanoma gp100 antibody [HMB45] (ab787)

Overlay histogram showing Malme-3 cells stained with ab787 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab787, 1/10 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Malme-3 cells fixed with 4% paraformaldehyde

(10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors