

PMEL Monoclonal Antibody (HMB45)

Catalog NumberMA5-13232

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Human
Host/Isotope	Mouse / IgG1, kappa	Published species	Bovine, Mouse, Human, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	Dilution *	
Clone	HMB45	Immunohistochemistry (Paraffin) (IHC (P))	1:40-1:80
Immunogen	Extract of pigmented melanoma metastases from lymph nodes	Published Applications	
Conjugate	Unconjugated	Immunohistochemistry (Paraffin) (IHC (P))	See 2 publications below
Form	Liquid	Western Blot (WB)	See 4 publications below
Concentration	0.2 mg/mL	Immunocytochemistry (ICC/IF)	See 11 publications below
Purification	Protein A/G	Immunohistochemistry (Frozen) (IHC (F))	See 1 publications below
Storage buffer	10mM PBS with 0.05% BSA	Flow Cytometry (Flow)	See 2 publications below
Contains	0.05% sodium azide	Miscellaneous PubMed (Misc)	See 1 publications below
Storage Conditions	4° C	Immunohistochemistry (IHC)	See 16 publications below
		Neutralization (Neu)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

MA5-13232 targets Melanoma (gp100) in IHC (P) and WB applications and shows reactivity with Human samples. The MA5-13232 immunogen is extract of pigmented melanoma metastases from lymph nodes.

Background/Target Information

Melanoma is a malignant tumor of melanocytes which are found predominantly in skin but also in the bowel and the eye (see uveal melanoma). It is one of the rarer types of skin cancer but causes the majority of skin cancer related deaths.

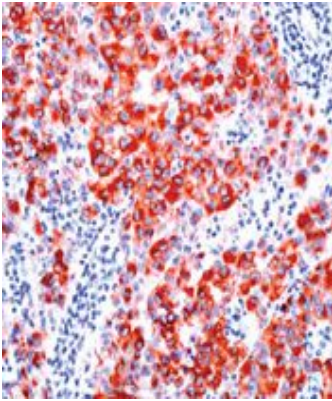
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Product Images For PMEL Monoclonal Antibody (HMB45)



PMEL Antibody (MA5-13232) in IHC (P)
Formalin-fixed, paraffin-embedded human melanoma stained with Melanoma antibody using peroxidase-conjugate and AEC chromogen. Note cytoplasmic staining of tumor cells.

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PubMed References For PMEL Monoclonal Antibody (HMB45)

2 Immunohistochemistry (Paraffin) References

Species / Dilution	Summary
Mouse / 1:100	MA5-13232 was used in Immunohistochemistry-paraffin-immunofluorescence to reveal a significant pigment loss in the retinal pigment epithelium (RPE) but not in the choroid.
	Pigment cell & melanoma research (2022; 35: 212) "Impact of a SLC24A5 variant on the retinal pigment epithelium of a Japanese patient with oculocutaneous albinism type 6." Author(s):Saito T,Okamura K,Kosaki R,Wakamatsu K,Ito S,Nakajima O,Yamashita H,Hozumi Y,Suzuki T PubMed Article URL: http://dx.doi.org/10.1111/pcmr.13024
Not Applicable / 1:40	MA5-13232 was used in immunohistochemistry - paraffin section to present two cases of epithelioid PEComas Case reports in medicine (2012; 2012:) "Cardiac Epithelioid PEComa: Report of Two Cases and Review of the Literature." Author(s):Niu H,Wang FW,Zhang PJ,Bing Z PubMed Article URL: http://dx.doi.org/10.1155/2012/521678

4 Western Blot References

Species / Dilution	Summary
Human / Not Cited	MA5-13232 was used in western blot to study the regulation of the melanosomal matrix protein gp100 by Rab7 The Journal of investigative dermatology (2008; 128: 143) "Rab7 regulates maturation of melanosomal matrix protein gp100/Pmel17/Silv." Author(s):Kawakami A,Sakane F,Imai S,Yasuda S,Kai M,Kanoh H,Jin HY,Hirosaki K,Yamashita T,Fisher DE,Jimbow K PubMed Article URL: http://dx.doi.org/10.1038/sj.jid.5700964
	MA5-13232 was used in western blot to investigate the role of PMEL mutations in physiological and pathological amyloid fibril formation
Mouse / Not Cited	PLoS genetics (2011; 7:) "Mutations in or near the transmembrane domain alter PMEL amyloid formation from functional to pathogenic." Author(s):Watt B,Tenza D,Lemmon MA,Kerje S,Raposo G,Andersson L,Marks MS PubMed Article URL: http://dx.doi.org/10.1371/journal.pgen.1002286
Mouse / Not Cited	MA5-13232 was used in western blot to investigate the role of cell-specific ATP7A transport in copper-dependent tyrosinase activity of melanosomes
	Nature (2008; 454: 1142) "Cell-specific ATP7A transport sustains copper-dependent tyrosinase activity in melanosomes." Author(s):Setty SR,Tenza D,Sviderskaya EV,Bennett DC,Raposo G,Marks MS PubMed Article URL: http://dx.doi.org/10.1038/nature07163
Human / 1:500	MA5-13232 was used in western blot to study the behavior and functional abilities of melanocytes expressing MC1R red hair color variants
	Journal of cellular physiology (2008; 215: 344) "Melanocytes expressing MC1R polymorphisms associated with red hair color have altered MSH-ligand activated pigmentary responses in coculture with keratinocytes." Author(s):Roberts DW,Newton RA,Leonard JH,Sturm RA PubMed Article URL: http://dx.doi.org/10.1002/jcp.21318

11 Immunocytochemistry References

Species / Dilution	Summary
Human / Not Cited	MA5-13232 was used in Immunocytochemistry to evaluate the effects of madecassoside on oxidative stress in human melanocytes and its mechanism of action.
	Oncotarget (2017; 8: 51066) "Protective effect of madecassoside on H₂O₂-induced oxidative stress and autophagy activation in human melanocytes." Author(s):Ling Y,Gong Q,Xiong X,Sun L,Zhao W,Zhu W,Lu Y PubMed Article URL: http://dx.doi.org/10.18632/oncotarget.17654
Mouse / 1:200	MA5-13232 was used in Immunocytochemistry-immunofluorescence to study the pathogenesis of Oculocutaneous albinism (OCA) type 6.
	Journal of cell science (2019; 132:) "Mitochondrial NCKX5 regulates melanosomal biogenesis and pigment production." Author(s):Zhang Z,Gong J,Sviderskaya EV,Wei A,Li W PubMed Article URL: http://dx.doi.org/10.1242/jcs.232009

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	MA5-13232 was used in immunocytochemistry to investigate the role of proprotein convertase cleavage in melanosome biogenesis
Human / Not Cited	<p>The Journal of cell biology (2003; 161: 521) "Proprotein convertase cleavage liberates a fibrillogenic fragment of a resident glycoprotein to initiate melanosome biogenesis." Author(s):Berson JF,Theos AC,Harper DC,Tenza D,Raposo G,Marks MS PubMed Article URL:http://dx.doi.org/10.1083/jcb.200302072</p>
	MA5-13232 was used in immunocytochemistry to study the delivery of OCA2 to melanosomes and the distinct roles played by AP-1 and AP-3
Mouse / Not Cited	<p>Molecular biology of the cell (2012; 23: 3178) "Differential recognition of a dileucine-based sorting signal by AP-1 and AP-3 reveals a requirement for both BLOC-1 and AP-3 in delivery of OCA2 to melanosomes." Author(s):Sitaram A,Dennis MK,Chaudhuri R,De Jesus-Rojas W,Tenza D,Setty SR,Wood CS,Sviderskaya EV,Bennett DC,Raposo G,Bonifacino JS,Marks MS PubMed Article URL:http://dx.doi.org/10.1091/mbc.E11-06-0509</p>
	MA5-13232 was used in immunocytochemistry and western blot to study Pmel17 processing in melanocytes
Not Applicable / Not Cited	<p>The Journal of biological chemistry (2011; 286: 9321) "Proprotein convertases process Pmel17 during secretion." Author(s):Leonhardt RM,Vigneron N,Rahner C,Cresswell P PubMed Article URL:http://dx.doi.org/10.1074/jbc.M110.168088</p>
	MA5-13232 was used in immunocytochemistry to propose that VAMP7 mediates fusion of BLOC-1-dependent transport carriers with melanosomes
Mouse / Not Cited	<p>The Journal of cell biology (2016; 214: 293) "BLOC-1 and BLOC-3 regulate VAMP7 cycling to and from melanosomes via distinct tubular transport carriers." Author(s):Dennis MK,Delevoye C,Acosta-Ruiz A,Hurbain I,Romao M,Hesketh GG,Goff PS,Sviderskaya EV,Bennett DC,Luzio JP,Galli T,Owen DJ,Raposo G,Marks MS PubMed Article URL:http://dx.doi.org/10.1083/jcb.201605090</p>
	MA5-13232 was used in immunocytochemistry to confirm the diagnostic value of endoscopic ultrasound-guided fine-needle aspiration
Human / 1:800	<p>Cancer cytopathology (2011; 119: 37) "Endoscopic ultrasound-guided fine-needle aspiration of intrathoracic and intra-abdominal spindle cell and mesenchymal lesions." Author(s):Bean SM,Baker A,Eloubeidi M,Eltoum I,Jhala N,Crowe R,Jhala D,Chhieng DC PubMed Article URL:http://dx.doi.org/10.1002/cncp.20120</p>
	MA5-13232 was used in immunocytochemistry to investigate the role of Rab27A specific mutation in Griscelli syndrome
Human / 1:100	<p>Molecular genetics and metabolism (2008; 94: 248) "A novel missense mutation (G43S) in the switch I region of Rab27A causing Griscelli syndrome." Author(s):Westbroek W,Tuchman M,Tinloy B,De Wever O,Vilboux T,Hertz JM,Hasle H,Heilmann C,Helip-Wooley A,Kleta R,Gahl WA PubMed Article URL:http://dx.doi.org/10.1016/j.ymgme.2008.02.009</p>
	MA5-13232 was used in immunocytochemistry to report on new cases of Griscelli syndrome type III
Human / 1:300	<p>Pigment cell & melanoma research (2012; 25: 47) "Cellular and clinical report of new Griscelli syndrome type III cases." Author(s):Westbroek W,Klar A,Cullinane AR,Ziegler SG,Hurvitz H,Ganem A,Wilson K,Dorward H,Huizing M,Tamimi H,Vainshtein I,Berkun Y,Lavie M,Gahl WA,Anikster Y PubMed Article URL:http://dx.doi.org/10.1111/j.1755-148X.2011.00901.x</p>
	MA5-13232 was used in immunocytochemistry to study the trafficking of melanocyte-specific proteins in Hermansky-Pudlak syndrome type-5 melanocytes
Human / 1:200	<p>The Journal of investigative dermatology (2007; 127: 1471) "Improper trafficking of melanocyte-specific proteins in Hermansky-Pudlak syndrome type-5." Author(s):Helip-Wooley A,Westbroek W,Dorward HM,Koshoffer A,Huizing M,Boissy RE,Gahl WA PubMed Article URL:http://dx.doi.org/10.1038/sj.jid.5700737</p>
	MA5-13232 was used in immunocytochemistry to study the clinical and cellular characteristics of Hermansky-Pudlak syndrome subtype 6
Human / 1:200	<p>Journal of medical genetics (2009; 46: 803) "Clinical and cellular characterisation of Hermansky-Pudlak syndrome type 6." Author(s):Huizing M,Pederson B,Hess RA,Griffin A,Helip-Wooley A,Westbroek W,Dorward H,O'Brien KJ,Golas G,Tsilou E,White JG,Gahl WA PubMed Article URL:http://dx.doi.org/10.1136/jmg.2008.065961</p>

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1 Immunohistochemistry (Frozen) References

Species / Dilution	Summary
Human / 1:150	MA513232 was used in immunohistochemistry - frozen section to investigate the role of natural killer cells to lymphangioleiomyomatosis pathogenesis
	JCI insight (2016; 1:) "NK cell activating receptor ligand expression in lymphangioleiomyomatosis is associated with lung function decline."
	Author(s):Osterburg AR,Nelson RL,Yaniv BZ,Foot R,Donica WR,Nashu MA,Liu H,Wikenheiser-Brokamp KA,Moss J, Gupta N,McCormack FX,Borchers MT PubMed Article URL: http://dx.doi.org/10.1172/jci.insight.87270

2 Flow Cytometry References

Species / Dilution	Summary
Human / Not Cited	MA5-13232 was used in flow cytometry to examine the allogenic glioma cells for the generation of therapeutic vaccines or cellular therapy
	Clinical cancer research : an official journal of the American Association for Cancer Research (2007; 13: 566) "Antigenic profiling of glioma cells to generate allogeneic vaccines or dendritic cell-based therapeutics."
	Author(s):Zhang JG,Eguchi J,Kruse CA,Gomez GG,Fakhr ai H,Schroter S,Ma W,Hoa N,Minev B,Delgado C,Wepsic HT, Okada H,Jadus MR PubMed Article URL: http://dx.doi.org/10.1158/1078-0432.CCR-06-1576
Mouse / Not Cited	MA5-13232 was used in flow cytometry to investigate the role of BLOC-2 in endosomal tubular transport in melanosomes
	The Journal of cell biology (2015; 209: 563) "BLOC-2 targets recycling endosomal tubules to melanosomes for cargo delivery."
	Author(s):Dennis MK,Mantegazza AR,Snir OL,Tenza D,Acosta-Ruiz A,Delevoye C,Zorger R,Sitaram A,de Jesus-Rojas W, Ravichandran K,Rux J,Sviderskaya EV,Bennett DC,Raposo G,Marks MS,Setty SR PubMed Article URL: http://dx.doi.org/10.1083/jcb.201410026

1 Miscellaneous PubMed References

Species / Dilution	Summary
Human / 1:80	MA5-13232 was used in immunohistochemistry to present a case of highly aggressive ocular melanoma
	Romanian journal of morphology and embryology = Revue roumaine de morphologie et embryologie (2016; 56: 817) "A challenging case of ocular melanoma."
	Author(s):Costache M,Dumitru AV,Ptracu OM,Popa-Cherecheanu DA,Bdil P,Miu JC,Procop A,Popa M,Tampa M,Sajin M, Simionescu O,Cirstoiu MM PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/26429178

16 Immunohistochemistry References

Species / Dilution	Summary
Human / Not Cited	MA5-13232 was used in immunohistochemistry to study patterns of repigmentation in two cases of hypopigmented type of vitiligo
	Photodermatology, photoimmunology & photomedicine (2009; 25: 156) "Patterns of repigmentation in two cases of hypopigmented type of vitiligo."
	Author(s):Anbar TS,El-Sawy AE,Attia SK,Moftah NH,El-Tonsy MH PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0781.2009.00423.x
Human / Not Cited	MA5-13232 was used in immunohistochemistry to study the effects of PUVA treatment on melanocytes and keratinocytes from patients with non-segmental vitiligo
	Photodermatology, photoimmunology & photomedicine (2012; 28: 17) "Effect of PUVA therapy on melanocytes and keratinocytes in non-segmental vitiligo: histopathological, immuno- histochemical and ultrastructural study."
	Author(s):Anbar TS,El-Sawy AE,Attia SK,Barakat MT,Moftah NH,El-Ammawy TS,Abdel-Rahman AT,El-Tonsy MH PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0781.2011.00631.x
Human / Not Cited	MA5-13232 was used in immunohistochemistry to study the correlation between cellular defects, genotype and clinical phenotype in Chediak-Higashi syndrome
	The Journal of investigative dermatology (2007; 127: 2674) "Cellular defects in Chediak-Higashi syndrome correlate with the molecular genotype and clinical phenotype."
	Author(s):Westbroek W,Adams D,Huizing M,Koshoffer A,Dorward H,Tinloy B,Parkes J,Helip-Wooley A,Kleta R,Tsilou E, Duvernay P,Digre KB,Creel DJ,White JG,Boissy RE,Gahl WA PubMed Article URL: http://dx.doi.org/10.1038/sj.jid.5700899

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	MA5-13232 was used in immunohistochemistry to investigate the differentiating features between primary melanoma and its cutaneous metastasis
Human / Not Cited	Romanian journal of internal medicine = Revue roumaine de medecine interne (2009; 46: 375) "Cutaneous metastases of malignant melanoma--how difficult can it be?" Author(s):Zurac S,Andrei R,Petsakos G,Nichita L,Bastian A,Micu G,Gramad E,Popp C,Stniceanu F,Petrescu S,Negroiu G, Giurcneanu D,Chiu V PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/19480306
Human / Not Cited	MA5-13232 was used in immunohistochemistry to investigate the level of CD1a in uterine epithelioid smooth muscle tumors Annals of diagnostic pathology (2008; 12: 401) "Epithelioid smooth muscle tumors of the uterus do not express CD1a: a potential immunohistochemical adjunct in their distinction from uterine perivascular epithelioid cell tumors." Author(s):Fadare O,Liang SX PubMed Article URL: http://dx.doi.org/10.1016/j.anndiagpath.2008.04.009
Mouse / Not Cited	MA5-13232 was used in immunohistochemistry to identify the proton pump on immature melanosomes as the vacuolar H (+)-ATPase a3 isoform Cell and tissue research (2008; 332: 447) "Vacuolar-type H(+)-ATPase with the a3 isoform is the proton pump on premature melanosomes." Author(s):Tabata H,Kawamura N,Sun-Wada GH,Wada Y PubMed Article URL: http://dx.doi.org/10.1007/s00441-008-0597-5
Bovine / Not Cited	MA5-13232 was used in immunohistochemistry to investigate histological features in a Holstein heifer with melanosis Journal of veterinary medicine. A, Physiology, pathology, clinical medicine (2007; 54: 501) "Melanosis in a Holstein heifer." Author(s):Oruç E PubMed Article URL: http://dx.doi.org/10.1111/j.1439-0442.2007.00954.x
Human / 1:50	MA5-13232 was used in immunohistochemistry to report on a case of sporadic haemangioblastoma of the kidney with rhabdoid features and focal CD10 expression Diagnostic pathology (2012; 7:) "Sporadic haemangioblastoma of the kidney with rhabdoid features and focal CD10 expression: report of a case and literature review." Author(s):Yin WH,Li J,Chan JK PubMed Article URL: http://dx.doi.org/10.1186/1746-1596-7-39
Human / Not Cited	MA5-13232 was used in immunohistochemistry to investigat specific CD8+ tissue-infiltrating T cells in a patient with melanoma Melanoma research (2006; 16: 165) "Accumulation of low-avidity anti-melanocortin receptor 1 (anti-MC1R) CD8+ T cells in the lesional skin of a patient with melanoma-related depigmentation." Author(s):Wankowicz-Kalinska A,Mailliard RB,Olson K,Graham F,Edington H,Kirkwood JM,Martinek S,Das PK,Storkus WJ PubMed Article URL: http://dx.doi.org/10.1097/01.cmr.0000198452.03957.73
Mouse / 1:1000	MA5-13232 was used in immunohistochemistry to study the effects of targeting BRAF(V600E) on melanoma growth in an inducible murine model The American journal of pathology (2012; 181: 785) "Targeting BRAFV600E in an inducible murine model of melanoma." Author(s):Hooijkaas AI,Gadiot J,van der Valk M,Mooi WJ,Blank CU PubMed Article URL: http://dx.doi.org/10.1016/j.ajpath.2012.06.002
Human / 1:100	MA5-13232 was used in immunohistochemistry to report on a case of primary myoepithelial carcinoma of the larynx Pathology, research and practice (2011; 207: 127) "Primary myoepithelial carcinoma of the larynx: case report and review of the literature." Author(s):Yu G,Qu G,Kong L,Pan X,Wang W,Lv J PubMed Article URL: http://dx.doi.org/10.1016/j.prp.2010.10.006
Human / Not Cited	MA5-13232 was used in immunohistochemistry to study pulmonary meningothelial-like nodules The American journal of surgical pathology (2009; 33: 487) "Pulmonary meningothelial-like nodules: new insights into a common but poorly understood entity." Author(s):Mukhopadhyay S,El-Zammar OA,Katzenstein AL PubMed Article URL: http://dx.doi.org/10.1097/PAS.0b013e31818b1de7

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	MA5-13232 was used in immunohistochemistry to report on a case of vulvovaginal alveolar soft part sarcoma
Human / Not Cited	<p>International journal of gynecological pathology : official journal of the International Society of Gynecological Pathologists (2014; 33: 263)</p> <p>"ASPL-TFE3 translocation in vulvovaginal alveolar soft part sarcoma."</p> <p>Author(s):Jabbour MN,Seoud M,Al-Ahmadie H,Abdul-Karim FW,Zaatari GS</p> <p>PubMed Article URL:http://dx.doi.org/10.1097/PGP.0b013e318290407c</p>
	MA5-13232 was used in immunohistochemistry to report a clinical case of t(6;11)(p21;q12) renal-cell carcinoma
Human / Not Cited	<p>Genes, chromosomes & cancer (2007; 46: 419)</p> <p>"Characterization of t(6;11)(p21;q12) in a renal-cell carcinoma of an adult patient."</p> <p>Author(s):Pecciarini L,Cangi MG,Lo Cunsolo C,Macri' E,Dal Cin E,Martignoni G,Dogliani C</p> <p>PubMed Article URL:http://dx.doi.org/10.1002/gcc.20422</p>
	MA5-13232 was used in immunohistochemistry to study the role of SOX18 function function in tumor lymphangiogenesis and metastasis of melanoma in mice
Human / 1:200	<p>Cancer research (2012; 72: 3105)</p> <p>"Genetic ablation of SOX18 function suppresses tumor lymphangiogenesis and metastasis of melanoma in mice."</p> <p>Author(s):Duong T,Proulx ST,Luciani P,Leroux JC,Detmar M,Koopman P,Francois M</p> <p>PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-11-4026</p>
	MA5-13232 was used in immunohistochemistry to report a clinical case of microscopic lymphangioleiomyomatosis perivascular epithelioid cell neoplasm in uterus
Human / 1:150	<p>International journal of gynecological pathology : official journal of the International Society of Gynecological Pathologists (2011; 30: 71)</p> <p>"Microscopic uterine lymphangioleiomyomatosis perivascular epithelioid cell neoplasm: a case report with the earliest manifestation of this enigmatic neoplasm."</p> <p>Author(s):Clay MR,Gibson P,Lowell J,Cooper K</p> <p>PubMed Article URL:http://dx.doi.org/10.1097/PGP.0b013e3181efe08d</p>
1 Neutralization References	
Species / Dilution	Summary
	MA5-13232 was used in blocking or activating experiment to study the T cell immune response against melanoma elicited through conjugation of melanoma antigen with mannose receptor antibody
Human / Not Cited	<p>Journal of immunology (Baltimore, Md. : 1950) (2004; 172: 2845)</p> <p>"Mannose receptor targeting of tumor antigen pmel17 to human dendritic cells directs anti-melanoma T cell responses via multiple HLA molecules."</p> <p>Author(s):Ramakrishna V,Treml JF,Vitale L,Connolly JE,O'Neill T,Smith PA,Jones CL,He LZ,Goldstein J,Wallace PK,Keler T,Endres MJ</p> <p>PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.172.5.2845</p>

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