Melanoma Marker (HMB45): sc-59305

SANTA CRUZ® BIOTECHNOLOGY

The Power to Question

BACKGROUND

Malignant melanoma is a malignant neoplasm of melanocytes, arising *de novo* or from a pre-existing benign nevus, which occurs most often in the skin but also may involve other sites. It underlies the majority of skin cancer-related deaths. Melanoma originates in melanocytes, the cells which produce the pigment melanin that colors our skin, hair and eyes and is heavily concentrated in most moles. Epidemiologic studies suggest that exposure to ultraviolet radiation is one of the major contributors to the development of melanoma. The four most common types of melanoma in the skin are: superficial spreading melanomas, which evolve from a precursor lesion (usually a dysplastic nevus), nodular melanomas, the most aggressive form, acral lentiginous melanomas, which are seen on the palms, soles and under the nails, and Lentigo malignas, which consist of malignant cells but do not show invasive growth.

SOURCE

Melanoma Marker (HMB45) is a mouse monoclonal antibody raised against extract of pigmented melanoma metastases from lymph nodes of human origin.

PRODUCT

Each vial contains 200 µg IgG$_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Melanoma Marker (HMB45) is available conjugated to agarose (sc-59305 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59305 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59305 PE), fluorescein (sc-59305 FITC), Alexa Fluor® 488 (sc-59305 AF488), Alexa Fluor® 546 (sc-59305 AF546), Alexa Fluor® 594 (sc-59305 AF594) or Alexa Fluor® 647 (sc-59305 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59305 AF680) or Alexa Fluor® 790 (sc-59305 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Melanoma Marker (HMB45) is recommended for detection of a neuraminidase sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes in junctional and blue nevus cells of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with non-melanocytic cells.

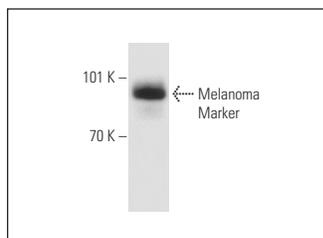Positive Controls: SK-MEL-28 cell lysate: sc-2236 or A-431 whole cell lysate: sc-2201.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.
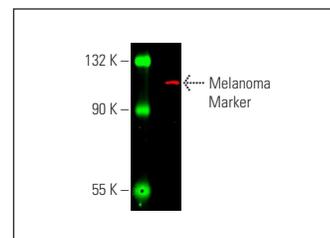
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA

Melanoma Marker (HMB45): sc-59305. Western blot analysis of Melanoma Marker expression in SK-MEL-28 whole cell lysate.

Melanoma Marker (HMB45) Alexa Fluor® 790: sc-59305 AF790. Direct near-infrared western blot analysis of Melanoma Marker expression in A-431 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 680: sc-516730.

SELECT PRODUCT CITATIONS

1. Di Tomaso, T., et al. 2010. Immunobiological characterization of cancer stem cells isolated from glioblastoma patients. Clin. Cancer Res. 16: 800-813.

2. Mitra, D., et al. 2012. An ultraviolet-radiation-independent pathway to melanoma carcinogenesis in the red hair/fair skin background. Nature 491: 449-453.

3. Zuliani, T., et al. 2013. Fetal fibroblasts and keratinocytes with immuno-suppressive properties for allogeneic cell-based wound therapy. PLoS ONE 8: e70408.

4. Noguchi, S., et al. 2014. Analysis of microRNA-203 function in CREB/MITF/RAB27a pathway: comparison between canine and human melanoma cells. Vet. Comp. Oncol. 14: 384-394.

5. Ruiz de Garibay, G., et al. 2015. Lymphangioleiomyomatosis biomarkers linked to lung metastatic potential and cell stemness. PLoS ONE 10: e0132546.

6. Nuñez, O., et al. 2016. Study of breast cancer incidence in patients of lymphangioleiomyomatosis. Breast Cancer Res. Treat. 156: 195-201.

7. Zhou, D., et al. 2017. A novel P53/POMC/G$_{\alpha\,s}$/SASH1 autoregulatory feedback loop activates mutated SASH1 to cause pathologic hyperpigmentation. J. Cell. Mol. Med. 21: 802-815.

8. Knol, A.C., et al. 2018. PD-L1 expression by tumor cell lines: a predictive marker in melanoma. Exp. Dermatol. 27: 647-655.

9. Zhou, D., et al. 2018. Mammalian pigmentation is regulated by a distinct cAMP-dependent mechanism that controls melanosome pH. Sci. Signal. 11: eaau7987.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.