SANTA CRUZ BIOTECHNOLOGY, INC.

Melanoma Marker (PNL2): sc-59306

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 may also involve other sites. It underlies the majority of skin cancer-related deaths. Melanoma originates in melanocytes, the cells which produce the pigment melanin, which colors human 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 super-ficial 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.

REFERENCES

1. van Duinen, S.G., et al. 1984. Immunohistochemical and histochemical tools in the diagnosis of amelanotic melanoma. Cancer 53: 1566-1573.

2. Bonetti, F., et al. 1989. Breast carcinoma with positive results for Melanoma Marker (HMB-45). HMB-45 immunoreactivity in normal and neoplastic breast. Am. J. Clin. Pathol. 92: 491-495.

SOURCE

Melanoma Marker (PNL2) is a mouse monoclonal antibody raised against a fixative resistant melanocyte associated antigen of mouse origin.

PRODUCT

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

Melanoma Marker (PNL2) is available conjugated to agarose (sc-59306 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59306 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59306 PE), fluorescein (sc-59306 FITC), Alexa Fluor® 488 (sc-59306 AF488), Alexa Fluor® 546 (sc-59306 AF546), Alexa Fluor® 594 (sc-59306 AF594) or Alexa Fluor® 647 (sc-59306 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59306 AF680) or Alexa Fluor® 790 (sc-59306 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 (PNL2) is recommended for detection of melanocytes of mouse and human origin by immunofluorescence (starting dilution 1:50, dilu-tion range 1:50-1:500) and immunohistochemistry (including paraffin-embed-ded sections) (starting dilution 1:50, dilution range 1:50-1:500); It localizes to the plasma membrane and cytoplasm of melanocytes and is a useful tool for identification of melanomas and clear cell sarcomas.
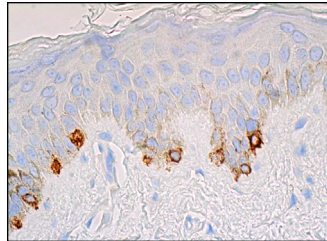
STORAGE

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 (PNL2): sc-59306. Immunoperox-idase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of subset of melanocytes.

SELECT PRODUCT CITATIONS

1. Ramos-Vara, J.A. and Miller, M.A. 2011. Immunohistochemical identifi-cation of canine melanocytic neoplasms with antibodies to melanocytic antigen PNL2 and tyrosinase: comparison with Melan A. Vet. Pathol. 48: 443-450.

2. Ramos-Vara, J.A., et al. 2014. Immunohistochemical expression of melanocytic antigen PNL2, Melan A, S100, and PGP 9.5 in equine melanocytic neoplasms. Vet. Pathol. 51: 161-166.

3. Hirz, M. and Herden, C. 2016. Cutaneous amelanotic signet-ring cell malignant melanoma with interspersed myofibroblastic differentiation in a young cat. J. Vet. Diagn. Invest. 28: 429-435.

4. Grosas, S., et al. 2017. Uveal myxoid leiomyosarcoma in a horse. Clin. Case Rep. 5: 1811-1818.

5. Dawson-Baglien, E.M., et al. 2018. Physiological characterization of ocular melanosis-affected canine melanocytes. Vet. Ophthalmol. 22: 132-146.

6. Pertl, K., et al. 2019. Expression of neuroectodermal markers in atypical fibromas in two dwarf hamsters *(Phodopus spp.)*. J. Comp. Pathol. 172: 53-57.

7. Silveira, T.L., et al. 2020. Cyclooxygenase-2 expression is associated with infiltration of inflammatory cells in oral and skin canine melanomas. Vet. Comp. Oncol. 18: 727-738.

8. Veloso, E.S., et al. 2020. Diverse roles of epidermal growth factors recep-tors in oral and cutaneous canine melanomas. BMC Vet. Res. 16: 24.

9. Denk, D., et al. 2020. Spontaneous neoplasia in captive syngnathid species: a retrospective case series (2003-2014) and literature review. J. Fish Dis. 43: 929-939.

10. Sforna, M., et al. 2021. Characterization of primary cultures of normal and neoplastic canine melanocytes. Animals 11: 768.

PROTOCOLS

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