

Inset: IHC of Melanosome/HMB-45 on a FFPE Malignant Melanoma Tissue

## Intended Use

For In Vitro Diagnostic Use.

Clone: HMB-45

Mouse Monoclonal

Melanosome/HMB-45

This antibody is intended for use in Immunohistochemical applications on formalinfixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

CE IVD

#### Immunogen

Purified pigmented melanoma metastases from lymph nodes (HMB45).

### **Summary and Explanation**

HMB-45 reacts against an antigen present in immature melanosomes, cutaneous melanocytes, prenatal and infantile retinal pigment epithelium and melanoma cells. This antibody was generated to an extract of Melanoma. It reacted positively against Melanocytic Tumors but not other tumors, thus demonstrating specificity and sensitivity. Moreover, this antibody reacts positively against junctional nevus cells but not intradermal nevi, and against fetal melanocytes but not normal adult melanocytes.

This antibody is very useful to identify Malignant Melanoma. Metastatic Amelanotic Melanoma can often be confused with a variety of poorly differentiated Carcinomas, Large Cell Lymphomas, Sarcomas, Spindle Cell Carcinomas and various types of mesenchymal neoplasms. A keratin-negative, vimentin-rich neoplasm that immunoreacts with antibody to S-100 protein and with this melanoma antibody, is, with rare exception, a Melanoma.

| Antibody Type      | Mouse Monoclonal | Clone      | HMB-45           |  |
|--------------------|------------------|------------|------------------|--|
| lsotype            | lgG1/K           | Reactivity | Paraffin, Frozen |  |
| Localization       | Cytoplasmic      | Control    | Melanoma         |  |
| Species Reactivity |                  | Human      |                  |  |

## Presentation

HMB-45 Melanoma antibody is a mouse monoclonal from tissue culture supernatant diluted in Phosphate Buffered Saline, pH 7.6, with protein base, and preserved with Sodium Azide preservative.

| Catalog Num. | Antibody Type    | Dilution       | Volume/Qty |
|--------------|------------------|----------------|------------|
| BSB 5757     | Tinto Prediluted | Ready-to-Use   | 3.0 mL     |
| BSB 5758     | Tinto Prediluted | Ready-to-Use   | 7.0 mL     |
| BSB 5759     | Tinto Prediluted | Ready-to-Use   | 15.0 mL    |
| BSB 5760     | Concentrated     | 1:250 - 1:1000 | 0.1 mL     |
| BSB 5761     | Concentrated     | 1:250 - 1:1000 | 0.5 mL     |
| BSB 5762     | Concentrated     | 1:250 - 1:1000 | 1.0 mL     |
| BSB 5763     | Control Slides   | Not Applicable | 5 slides   |

#### Precautions

**Presentations** 

For professional users only. Ensure results are interpreted by a medical professional.
 This product contains sodium azide (NaN3), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.

3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.

**6.** For complete recommendations for handling biological specimens please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (4).

#### Storage

**Store at 2-8** °C. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

### **Specimen Preparation**

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation to ensure best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042). Frozen sections and cell preparations: The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

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## **Staining Procedure**

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positive charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).

2. Air dry for 2 hours at 58° C.

3. Deparaffinize, dehydrate and rehydrate tissues.

4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033). 5. Any of three heating methods may be used:

### a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

### b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

### c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a Steamer, cover and steam for 30-60 minutes.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.

7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.

8. Wash slides with IHC wash buffer or DI water.

9. Continue IHC staining protocol.

## **Recommended IHC Protocol**

| Step                  | ImmunoDetector<br>AP/HRP | PolyDetector<br>AP/HRP | PolyDetector<br>Plus HRP |  |
|-----------------------|--------------------------|------------------------|--------------------------|--|
| Peroxidase/AP Blocker | 5 min.                   | 5 min.                 | 5 min                    |  |
| Primary Antibody      | 30-60 min.               | 30-60 min.             | 30-60 min.               |  |
| 1st Step Detection    | 10 min.                  | 30-45 min.             | 15 min.                  |  |
| 2nd Step Detection    | 10 min.                  | Not Applicable         | 15 min.                  |  |
| Substrate-Chromogen   | 5-10 min.                | 5-10 min.              | 5-10 min.                |  |
| Counterstain          | Varies                   | Varies                 | Varies                   |  |

## **Product Limitations**

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a medical professional.

## References

- 1. Gown AM, et al. A J Path. 1986;123:195
- 2. Wick MR, et al. Arch Path Lab. 1988;112:616
- 3. Leong ASY, et al. Surg Path. 1989:2:137

4. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

# Symbol Key / Légende des symboles/Erläuterung der Symbole

| EC REP EC | 2°C | Storage Temperature<br>Limites de température<br>Zulässiger Temperaturbereich                        | •••    | Manufacturer<br>Fabricant<br>Hersteller              | REF | Catalog Number<br>Référence du catalogue<br>Bestellnummer |
|--|-----|--|--------|--|-----|---|
| In Vitro Diagnostic Medical Device<br><b>IVD</b> Dispositif médical de diagnostic in vitro<br>In-Vitro-Diagnostikum  | ĺ   | Read Instructions for Use<br>Consulter les instructions d'utilisation<br>Gebrauchsanweisung beachten | $\sum$ | Expiration Date<br>Utiliser jusque<br>Verwendbar bis | LOT | Lot Number<br>Code du lot<br>Chargenbezeichnung           |





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