

HBME-1 (HBME-1)

Mouse anti-human Mesothelial Cell Monoclonal Antibody (Clone HBME-1)

REFERENCES AND PRESENTATIONS¹

- **ready-to-use** (manual or LabVision AutoStainer)
MAD-001707QD-3
MAD-001707QD-7
MAD-001707QD-12
- **Ready-to-use (MD-Stainer)²**
MAD-001707QD-3/V
MAD-001707QD/V
- **concentrated**
MAD-001707Q - 1:20 recommended dilution

COMPOSITION

Anti-human HBME-1 mouse monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide

INTENDED USE  Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting

CLONE: HBME-1

Ig ISOTYPE: Mouse IgM/K

SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species

DESCRIPTION AND APPLICATIONS: Antibody against HBME-1 stains the cytoplasmic membrane of normal pleural and peritoneal mesothelial cells and mesothelioma. Although both the membrane and the cytoplasm of mesothelioma cells stain positive with HBME-1, a thick membrane pattern turns out to be more useful for the diagnosis of malignant mesothelioma and it correlates with the presence of abundant "microvilli" in the surface membrane of these cells. There are other tissues (both malignant and normal) which are also positive with HBME-1, although immunostaining can be much weaker.

Although HBME-1 positivity has been proven in 19 of 50 adenocarcinomas of different origin, the pattern of staining observed was cytoplasmic, although occasionally weak membrane staining also appeared. This antibody shows useful to distinguish malignant

lesions of the thyroid (papillary and follicular) from benign lesions (goiter, adenomas, etc.). No cross reaction was observed with tissues such as kidney, liver, lung, ovary and pancreas.

IHC POSITIVE CONTROL: Mesothelioma, thyroid carcinoma

VISUALIZATION: Cytoplasm, cell membrane

IHC RECOMMENDED PROCEDURE:

- 4µm thick section should be taken on charged slides; dry overnight at 60°C
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Vitro S.A TrisEDTA buffer pH9³ for 20 min at 95°C. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 30 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

STORAGE AND STABILITY:  Stored at 2-8°C. Do not freeze.  Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

WARNINGS AND PRECAUTIONS:

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

¹ These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:
- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
For different presentations (references / volumes) please contact the supplier.

² For Technical specifications for MD-Stainer, please contact your distributor.

³ Ref: MAD-004070R/D



SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at www.vitro.bio or can be requested at regulatory@vitro.bio.

BIBLIOGRAPHY

1. Battifora H, McCaughey WTE. Tumors of the serous membranes. In: Rosai J (ed.). Atlas of tumor pathology. 3rd series. Fascicle 15. Washington: Armed Forces Inst Pathol 1995.
2. Miettinen M and Kovatich AJ. HBME-1 a monoclonal antibody useful in the differential diagnosis of mesothelioma, adenocarcinoma, and softtissue and bone tumors. Appl Immunohistochem 1995; 3(2):115
3. Renshaw AA, Pinkus GS, Corson JM. HBME-1 aids in distinguishing mesotheliomas and adenocarcinomas of the lung and breast. Mod Pathol; 8(1):152A 1995
4. Savera AT, Raju U, Linden VITRO S.A. Mesothelioma vs. adenocarcinoma: Diagnostic utility of HBME-1. Mod Pathol; 9(1):162A. 1996.
5. Brown RW, Gondo M, Stephenson M, Cagle PT. Patterns of HBME-1 immunoreactivity differentiate epithelial mesothelioma from adenocarcinoma of the lung. Mod Pathol; 76(1): 161A. 1997.
6. Coli A, Bigotti G, Parente P, Federico F, Castri F, Massi G. Atypical thyroid nodules express both HBME-1 and Galectin-3, two phenotypic markers of papillary thyroid carcinoma. J Exp Clin Cancer Res; 26(2): 221-227. 2007.
7. Cabibi D, Cacciatore M, Guarnotta C, Aragona F. Immunohistochemistry differentiates papillary thyroid carcinoma arising in ectopic thyroid tissue from secondary lymph node metastases. Thyroid; 17(7): 603-607. 2007.
8. Torregrossa L, Faviana P, Camacci T, Materazzi G, Berti P, Minuto M, Elisei R, Vitti P, Miccoli P, Basolo F. Galectin-3 is highly expressed in nonencapsulated papillary thyroid carcinoma but weakly expressed in encapsulated type; comparison with Hector Battifora mesothelial cell 1 immuno-reactivity. Hum Pathol; 38(10): 1482-1488. 2007.

LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
	Catalog number
	Lot code
	Refer to the instructions of use
	Medical product for <i>in vitro</i> diagnosis.
	Material safety data sheet



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