HISTOPRIME®

CatNo K022

Lot: See Label
Storage: 2 - 8°C for 1 month
-20°C for longer
Exp. Date: See Label

HEA 125 (CD326; Ep-CAM)

Monoclonal Antibody against human epithelial specific antigen

Specificity

The HEA 125 antibody recognizes an antigen that is a glycoprotein with a molecular weight of 34 kD and is expressed on the cell surface of most epithelial cell types.
If conversion from normal to neoplastic cells takes place, the expression of these proteins is maintained.

Synonyms

EP-CAM; Epithelial Glycoprotein 314, MK1; CD326 or TACSTD1

Contents

Reagents sufficient for about 200 tissue sections
1 vial **HISTOPRIME® HEA 125** (Vial**,** 0.1mg) concentration 1 mg/1 ml.

Application

This antibody reacts with all human epithelial cell types, in particular with all intestinal epithelia and all glandular and ciliated epithelia (except epidermis, sebaceous glands and cortical thymus epithelium). Furthermore, reaction occurs with all colon carcinoma cell lines and metastases derived from epithelia tested to date (see Tables 1 and 2). HEA 125 does not react with mesothelial cells. Keratinizing areas of a tumor mass usually remain unstained, as do sarcomas, lymphomas, melanomas, and neurogenic tumors.

The E022 antibody is suitable for differentiating between carcinoma and non-carcinoma in both cryostat sections and formalin-fixed paraffin sections.

Fusion Partners

One immunized Balb/c mice with a surface glycoprotein (MW 34 kD) from the HT 29 colon carcinoma cell line and fused their splenocytes with myeloma cells.

Info

HEA125 is an excellent marker for the study of epithelial and mesothelial structures.

K022-230109-1/4

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Characterization

Antigen	Human epithelial specific antigen (HEA 125)
Specificity	All human epithelial cell types (exceptions: see Tab.1) All carcinoma cell lines tested so far especially colon carcinoma cell lines (HT-29, WiDr, SW1116)
Immunogen	HAT-29 colon carcinoma cell line.
Abnormal Tissues	All carcinoma types
Clone	HEA 125
Isotype	Mouse IgG1
Pretreatment	proteolytic pretreatment with 0.1% Pronase (LINARIS CatNo E110) 10 min at room temperature or HISTOPRIME-ENHANCER (LINARIS CatNo E7000)10 min at 96-100°C in a water bath or in a microwave oven
Incubation Period	1 hour at room temperature after pretreatment or overnight at 37°C. (without proteolytic pretreatment)
Control Tissue	Appendix or colon carcinoma
Application	Concentrate (working solution 1/200) in PBS, BSA, NaN_3 (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
Recommended Secondary Reagents	**Alkaline Phosphatase** Vectastain® ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector® Red (Vector CatNo SK-5100). **Peroxidase** Vectastain® ABC-Elite Mouse IgG (Vector CatNo PK-6102) and Peroxidase Substrate-Kit e.g. DAB (LINARIS CatNo E108) or HistoGreen (LINARIS CatNo E109).

References

1. Edwards P.A.W.: Heterogeneous expression of cell-surface antigens in normal epithelia and their tumors, revealed by monoclonal antibodies. Br. J. Cancer 51,149 (1985)
2. Momburg F., Moldenhauer G., Hämmerling G.J., Möller P., Otto H.F.: Charakterisierung eines epithelspezifischen Zellmembranantigens mit Hilfe des monoklonalen Antikörpers HEA 125. Verh. Dtsch. Ges. Path. 69,627 (1985)
3. Möller P., Momburg F., Moldenhauer G.: Epitheliale Membranmarker-Bestandsaufnahme, eigene monklonale Antikörper und aktuelle Möglichkeiten der Anwendung in der Histopathologie. Verh. Dtsch. Ges. Path. 70,116-126 (1986)
4. Moldenhauer G., Momburg F., Möller P., Schwartz R., Hämmerling G.J.: Epithelium-specific surface glycoprotein of Mr 34000 is a widely distributed human carcinoma maker. Br. J. Cancer 56,714-721(1987)
5. Momburg F., Moldenhauer G., Hämmerling G.J., Möller P.: Immunohistochemical study of the expression of a Mr 34000 human epithelium specific surface glycoprotein in normal and malignant tissues. Cancer Research 47,2883-2891 (1987)
6. Hastka J., Pfiester P.: Zellmarker zur Differentialdiagnose maligner Mesotheliome. Pathologe 9,245-247 (1988)
7. Bohrer M.H., Hastka J., Verbeke C.S.: Differentialdiagnose von hepatischen Tumormanifestationen in der Tumordiagnose und Therapie 13,187-189 (1992)

Differential identification is aided by the results from a panel of antibodies. Interpretation must be made within the context of the patient's clinical history and other diagnostics tests by a qualified pathologist.

(*)Note **K022 contains Sodium Azide; take adequate precautions!**

K022-230109-2/4

For Research use only. Not for use in diagnostic procedure

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Tabelle 1 **Immunhistochemische Darstellung von HEA 125 in normalem Gewebe**

Gewebe / Organ	Befund	Anfärbung mit HEA 125
Verdauungstrakt		
Speicheldrüsen	Acini, Gänge	+
Ösophagus	Plattenepithel: Basalzellen	+
Magen	Muköse- und Hauptzellen	+
	Parietalzellen	-
Dünndarm	Epithel	+
Dickdarm	Epithel	+
Pankreas	Acini, Gänge	+
Leber	Gallengänge	+
	Hepatocyten	-
Gallenblase	Epithel	+
Haut und Anhänge		
Epidermis		-
Talgdrüsen		-
Apokrine und ekkrine Schweißdrüsen	Acini, Gänge	+
Milchdrüse	Acini, Gänge	+
Atmungsorgane		
Tracheen, Bronchien	Flimmerepithel	+
Bronchiolen	Epithelien	+
Alveolen	Pneumocyten I, II	+
Harntrakt		
Niere	Tubuläres Epithel	+
Harnleiter, Harnblase, Harnröhre	Übergangsepithel	+
Fortpflanzungsorgane		
Prostata	Epithel	+
Samenbläschen	Epithel	+
Ductus deferens	Epithel	+
Epididymis	Epithel	+
Testis	Spermatogien	+
	Spermatocten, Sertoli-Zellen	-
Ektocervix	Plattenepithel: Basalzellen	+
Uterus	Drüsen des Endometriums	+
Ovidukt	Epithel	+
Ovar	Oocyten	+
	Follikelepithel	-
Übriges Endokrinium		
Nebenniere	Rindenepithel	+
	Mark	-
Schilddrüse	Follikelepithel, C Zellen	+
Nebenschilddrüse	Epithel	+
Nebenschilddrüse	Epithel	+
Adenohypophyse	Epithel	+
Andere Gewebe		
Thymus	Medulläres Epithel	+
	Rindenepithel	-
Tonsillen	Kryptenepithel	+/-
Vasculäres Endothel, Mesothel, Synoviocyten, Meninges, Ependym, Plexus choroideus, Neuronen, Glia, Melanocyten, Fibrocyten, Lipocyten, Chondrocyten, Osteocyten, Blutzellen, Histocyten		alle negativ

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Tabelle 2 | **Immunhistochemische Darstellung von HEA 125 in malignen Tumoren**

Malignen Tumoren	**Anfärbung mit Anti-HEA 125 positiv / gesamt**
Kolonrectumkarzinom	121 / 121
Magenkarzinom	56 / 56
Leberkarzinom	4 / 4
Gallengangkarzinom	1 / 1
Pankreaskarzinom	5 / 5
Brustkarzinom	98 / 98
Lungenkarzinome	
Adenokarzinom	1 / 1
Großzelliges Karzinom	1 / 1
Kleinzelliges Karzinom	2 / 2
Pflasterzellkarzinome	
Mundhöhle	1 / 1
Zunge	2 / 2
Ösophagus	1 / 1
Larynx	3 / 4
Epidermis	0 / 1
Nierenzellkarzinom	25 / 25
Übergangszell-Karzinom	1 / 1
Ovarialkarzinom	5 / 5
Seminom	4 / 4
Schilddrüsenkarzinom	4 / 4
Malignes Karzinoid	3 / 3
Malignes Melanom	0 / 7
Malignes Lymphom	
Non-Hodgkin Lymphom	0 / 20
Hodgkin Lymphom	0 / 2
Myosarkom	0 / 5
Fibrosarkom	0 / 2
Ewing-Sarkom	0 / 2
Pheochromocytom	0 / 1
Astrocytom	0 / 1
Glioblastom	0 / 1
Neurinom	0 / 1
Meninginom	0 / 1
Malignes Synovialom	0 / 1

Tabellen nach Moldenhauer et al. (1987) und Momburg et al. (1987)

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