

## HISTOPRIME<sup>®</sup>

**CatNo K022AG**

### HEA 125 (CD326; Ep-CAM) (10 x Concentrate)

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

### 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 100 - 200 tissue sections  
1 vial **HISTOPRIME<sup>®</sup> HEA 125** (Vial, 1ml) 10 x Concentrate

#### 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 K022AG antibody is suitable for differentiating between carcinoma and non-carcinoma in both cryostat sections and formalin-fixed paraffin sections.

#### Fusion Partners

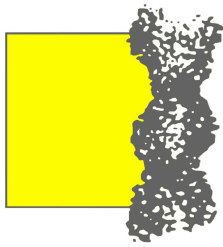
One immunized Balb/c mice with a surface glycoprotein (MW 34 kD) from the HT 29 colon carcinoma cell line and fused their splenocytes with myeloma cells.

#### Info

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

K022AG-230214-1/4





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### Characterization

<b>Antigen</b>	Human epithelial specific antigen (HEA 125)
<b>Specificity</b>	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)
<b>Immunogen</b>	HAT-29 colon carcinoma cell line.
<b>Abnormal Tissues</b>	All carcinoma types
<b>Clone</b>	HEA 125
<b>Isotype</b>	Mouse IgG1
<b>Pretreatment</b>	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
<b>Incubation Period</b>	1 hour at room temperature after pretreatment or overnight at 37°C. (without proteolytic pretreatment)
<b>Control Tissue</b>	Appendix or colon carcinoma
<b>Application</b>	10 x Concentrate in PBS, BSA, NaN <sub>3</sub> (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
<b>Recommended Secondary Reagents</b>	<b>Alkaline Phosphatase</b> Vectastain <sup>®</sup> ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector <sup>®</sup> Red (Vector CatNo SK-5100). <b>Peroxidase</b> Vectastain <sup>®</sup> 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 monoklonale 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 marker. 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., Pfister P.: Zellmarker zur Differentialdiagnose maligner Mesotheliome. Pathologie 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 **K022AG contains Sodium Azide; take adequate precautions!**

K022AG-230214-2/4

**For Research use only. Not for use in diagnostic procedure**

Manufacturer

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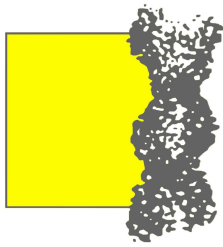
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## HISTOPRIME®

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Tabelle 1

Immunhistochemische Darstellung von HEA 125 in normalem Gewebe

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



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Tabelle 2

Immunhistochemische Darstellung von HEA 125 in malignen Tumoren

<b>Malignen Tumoren</b>	<b>Anfärbung mit Anti-HEA 125 positiv / gesamt</b>
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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