

Monoclonal Antibody to Cytokeratin 20 - FITC

Alternate names:	CK20, Cytokeratin 20, K20, KRT20, Keratin type I cytoskeletal 20, Keratin-20, Protein IT
Catalog No.:	BM2247F
Quantity:	0.25 ml
Concentration:	0.2 mg/ml
Background:	Cytokeratin 20 is a 46 kDa intermediate filament protein whose expression is restricted primarily to gastric and intestinal epithelium, urothelium, and Merkel cells. This antibody is highly specific to cytokeratin 20 and shows no cross-reactivity with other IFPs. Cytokeratin 20 is a unique type I keratin that is expressed in adenocarcinomas of the colon stomach, pancreas and bile system. It is also expressed in mucinous ovarian tumors, transitional cell carcinomas of the urinary tract, and Merkel cell carcinomas.
Uniprot ID:	P35900
NCBI:	NP_061883.1
GeneID:	54474
Host / Isotype:	Mouse / IgG1
Clone:	KS20.10
Immunogen:	Electrophoretically purified keratin K 20 from Human intestinal mucosa.
Format:	State: Liquid purified Ig fraction Purification: Affinity Chromatography Label: FITC
Applications:	FACS. Cytological Material. Immunohistochemistry on Frozen Sections. Immunohistochemistry on Paraffin Sections (Only after <i>microwave treatment</i>). <i>Recommended Dilutions:</i> 1/10-1/20 in PBS, PH 7.4 for Immunohistochemistry. <i>Incubation Time:</i> 1h at RT or over night at 2-8°C. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody represents an excellent marker for certain types of carcinomas such as adenocarcinomas of the colon, transitional cell carcinomas of the bladder and Merkel cell tumors of the skin. Very sensitive detection of intestestinal and gastric foveolar epithelium, urothelial umbrella cells, Merkel cells of epidermis as well as tumors originating therefrom (e.g. primary and metastatic colorectal carcinoma). Adenocarcinomas of breast, lung, endometrium and ovary (non-mucinous) as well as neuroendocrine tumors of the lung are essentially negative. Polypeptide Recognized: protein IT (keratin K20; Mr 46 000; formerly also designated

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cytokeratin 20).

Reactivities on Cultured Cell Lines (tested so far): HT-29, LoVo, DLD-1, SW 1116, CaCo-2, RT-4.

Species Reactivity: **Tested:** Human, Pig and Rat. Negative with Mouse.

Storage: Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Protect from light. Shelf life: one year from despatch.

General References:

1. Moll, R., Löwe, A., Laufer, J. and Franke, W.W.: Cytokeratin 20 in human carcinomas: A new histodiagnostic marker detected by monoclonal antibodies. *Am.J.Path.* 140, 427-447 (1992)
2. Moll, R., Schiller, D.L. and Franke, W.W.: Identification of protein IT of the intestinal cytoskeleton as a novel type I cytokeratin with unusual properties and expression patterns. *J.Cell.Biol.* 111, 567-580 (1990)
3. Moll, I. and Moll, R.: Comparative cytokeratin analysis of sweat gland ducts and eccrine poromas. *Arch Dermatol Res.* 283, 300-309 (1991)
4. Moll, R., Zimbelmann, R., Goldschmidt, M.D., Keith, M., Laufer, J., Kasper, M., Koch, P.J., Franke, W.W.: The human gene encoding cytokeratin 20 and its expression during fetal development and in gastrointestinal carcinomas. *Differentiation* 53, 75-93 (1993)
5. V.J. Möbus, R. Moll, C.D. Gerharz, D.G. Kieback, W. Weikel, G. Hoffmann & R. Kreienberg: Establishment of new ovarian and colon carcinoma cell lines: differentiation is only possible by cytokeratin analysis. *Br. J. Cancer* 69, 422-428 (1994)
6. Demirkesen C, Hoede N, Moll R: Epithelial markers and differentiation in adnexal neoplasms of the skin: an immunohistochemical study including individual cytokeratins. *J Cutan Pathol* 22, 518-535 (1995)
7. Chunxiao Zhang and Bruce Oakley. The distribution and origin of keratin 20-containing taste buds in rat and human. *Differentiation* 61, 121-127 (1996)
8. Harnden P, Eardley I, Joyce AD and J Southgate. Cytokeratin 20 as an objective marker of urothelial dysplasia. *British Journal of Cancer* 78, 870-875 (1996)

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Pictures:

KERATIN K20 IN TUMORS		
Miettinen	Mod Pathol 1995	Marker for differentiation of gastrointestinal, urothelial, and Merkel cell carcinomas (788 cases)
Moll	Subcellular Biochemistry (31) 1998	Marker for differentiation in the diagnosis of epithelial tumors
Chu + Weiss	Histopathology (40) 2002	Marker for differentiation in the diagnosis of epithelial tumors
Kaufmann et al.	Pathologe (23) 2002	Marker for differentiation in the diagnosis of epithelial tumors and metastases with unknown primary tumor
Wang et al.	Appl Immunohistochem 1995	Keratin K20 in adenocarcinoma
Wauters et al.	Hum Pathol 1995	Keratin K20 in adenocarcinoma
Ascoli et al.	Diagn Cytopathol 1995	Keratin K20 in adenocarcinoma
Loy + Calaluce	Am J Clin Pathol 1994	Keratin K20 in adenocarcinoma
Chu et al.	Mod Pathol (13) 2000	Keratin K20 in adenocarcinoma (coexpression with keratin K7)
Tot	Cancer (92) 2001	Keratin K20 in adenocarcinoma (coexpression with keratin K7)
Kummar et al.	Br J Cancer (86) 2002	Cytokeratin 20 in adenocarcinoma (coexpression with keratin K7)
Cathro + Stoler	Am J Clin Pathol (117) 2002	Keratin K20 in adenocarcinoma (coexpression with keratin K7)
Hernandez et al.	Human Pathology (36) 2005	Keratin K20 in adenocarcinoma (coexpression with keratin K7)
Ormsby et al.	Hum Pathol (30) 1999	Marker for <i>Barrett's carcinomas</i> (esophagus)
Harnden et al.	Br J Cancer (78) 1996	Marker for urothelial carcinoma
Harnden et al.	Lancet (353) 1999	Marker for urothelial carcinoma
Golijanin et al.	J Urol (164) 2000	Marker for urothelial carcinoma
Scott + Helm	Am J Dermatopathol (21) 1999	Marker for Merkel cell carcinoma
Cheuk et al.	Arch Pathol Lab Med (125) 2001	Marker for Merkel cell carcinoma
Leech et al.	J Clin Pathol (54) 2001	Marker for Merkel cell carcinoma
Su et al.	J Am Acad Dermatol (46) 2002	Marker for Merkel cell carcinoma
KERATIN K20 IN NORMAL CELLS		
Flint et al.	Epithelial Cell Biol 3) 1994	Marker for <i>intestinal epithelial cells</i> of villi
Kim + Holbrook	J. Invest Dermatol (104) 1995	Marker for <i>Merkel cells</i>
Bouwens et al.	J Histochem Cytochem (43) 1995	Marker for <i>rat pancreatic duct cells</i>
Moll et al.	J Invest Dermatol (104) 1995	Marker for cutaneous Merkel cells
Chunxiao + Oakley	Differentiation 61 (1996)	Marker for taste bud cells in human and rat
Barrett et al.	Arch Oral Biol (45) 2000	Marker for taste bud cells

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