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BM2244 Monoclonal Antibody to Cytokeratin 19 - Purified

Alternate names: CK19, Cytokeratin-19, K19, KRT19, Keratin type I cytoskeletal 19, Keratin-19

Quantity: 50 µg

Background: Cytokeratin 19 is a type I acidic subfamily of intermediate filament protein that is expressed in stratified and simple type epithelia. Keratin 19 is not expressed in hepatocytes; therefore, antibody to keratin 19 is useful in the identification of liver metastasis. The degree of keratin 19 positivity in breast cancer distinguishes malignant from benign tumors. Keratin 19 is often co-expressed with keratin 7.

Uniprot ID: P08727

NCBI: NP_002267.2

GeneID: 3880

Host / Isotype: Mouse / IgG2b

Recommended Isotype Controls: SM12P, AM03110PU-N

Clone: KS19.2(Z105.6)

Immunogen: Keratin K19 of Mr 40000 from cultured Human MCF-7 cells
AA Sequence:
VRADSERQNQEYQRLMD
Remarks: The epitope has been localized on amino acids 352-368 of the alpha-helical fragment.

Format:
State: Lyophilized purified IgG fraction
Purification: Affinity Chromatography on Protein A
Buffer System: PBS pH 7.4
Preservatives: 0.09% Sodium Azide
Stabilizers: 0.5% BSA
Reconstitution: Restore with 1.0 ml distilled water.

Applications:
ELISA.
Western blot.
Cytological Material.
Immunohistochemistry on Frozen Sections:
Dilution Buffer: Dilute 1/10 with PBS, pH 7.4, for use in Immunohistochemistry.
Incubation Time: 1 hour at room temperature.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody represents an excellent marker to discriminate glandular epithelial carcinoma from those of different origin. No reaction with hepatocellular Ca.! Recognizes a Mr 40,000 polypeptide (Cytokeratin 19) of Human glandular epithelia. Positive on the following cell lines: MCF-7, RT 112, Detroit 562, RPMI 2650, HT-29, SSC-12.
Tumors Specifically Detected: All tested adenocarcinoma; cholangio ca. of liver; renal

cell ca.; transitional cell ca. of the bladder; ovary ca.; squamous cell ca. of cervix, bronchus and lung (intermediate type); mesothelioma; carcinoid tumor of bronchus; breast ca.; thymoma.
Negative Species: Mouse, Woodchuck, Chicken and Xenopus.

Species Reactivity: **Tested:** Human, Rat, Fish, Bovine.

Add. Information: Clone Ks 19.2 (Z105.6) is also published as BM 19.21, MAK 19.21

Storage: Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

Bader, B.L. and Franke, W.W: Celltype-specific and efficient synthesis of human cytokeratin 19 in trangenic mice. D differentiation 45 109-118 (1990).
Bosch, F.X., Ouhayoun, J.-P., Bader, B.L., Collin, C., Grund, C., Lee, I. and Franke, W.W.: Extensive changes in cytokeratin expression patterns in pathologically affected human gingiva. Virchows Arch. B Cell Pathol. 58, 59-77 (1989).
Bosch, F.X., Leube, R.E., Achstatter, T., Moll, R. and Franke, W.W.: Expression of simple epithelial type of cytokeratins in stratified epithelia as detected by immunolocalization and hybridization in situ. J. Cell Bio. 106, 1635-1648 (1988).
Dockhorn-Dworniczak, B., Franke, W.W., Schroder, S., Czernobilsky, B., Gould, V.E. and Bocker, W.: Patterns of expression of cytoskeletal proteins in human thyroid gland and thyroid carcinomas. Differentiation 35, 53-71 (1987).
Heid, H.W., Moll, I. and Franke, W.W.: Patterns of expression of trichocytic and epithelial cytokeratins in mammalian tissues. I. Human and bovine hair follicles. Differentiation 37, 137-157 (1988).
Heid, H.W., Moll, I. and Franke, W.W.: Patterns of expression of trichocytic and epithelial cytokeratins in mammalian tissues. II. Concomittant and mutually exclusive synthesis of trichocytic and epithelial cytokeratins in diverse human and bovine tissues (hair follicle, nail bed and matrix, lingual papilla, thymic reticulum). Differentiation 37, 215-230 (1988).
Moll, R., Franke, W.W., Schiller, D.L., Geiger, B. and Krepler, R.: The catalog of human cytokeratins: Patterns of expression in normal epithelia, tumors and cultured cells. Cell 31, 11-24 (1982).
Moll, I., Heid, H.W., and Moll, R.: Cytokeratin analysis of pilomatrixoma: Changes in cytokeratin-type expression during differentiation. J.Invest. Dermatol. 91, 251-257 (1988).
Moll.I and Moll R.: Comparative cytokeratin analysis of sweat gland ducts and eccrine poromas. Arch Dermatol Res. 283, 300-309 (1991).
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).
Hasholzer U, Schambeck C, Fabricius PG, Stieber P, Hofmann K, Jansen H-M, Schmeller N, Fateh-Moghadam A: Die klinische Relevanz des neuen Tumormarkers CYFRA 21-1 bei Blasenkarzinomen im Verghleich zu TPA und TPS. Lab Med 17, 324-327 (1993).

Stieber P, Hasholzner U, Bodenmueller H, Nagel D, Sunder-Plassmen L, Dienemann H, Meier W, Fateh-Moghadam A: CYFRA 21-1, a new marker in lung cancer. Cancer 72, 707-713 (1990).
Pujol JL, Grenier J, Daures JP, Daver A, Pujol H, Michel FB: Serum fragment of cytokeratin subunit 19 measured by CYFRA 21-1 immunoradiometric assay as a marker of lung cancer. Cancer Res. 53, 61-66 (1993).
Van der Gaast A, Schoenmakers CHH, Kok TC, Blijenberg BG, Cornillie F, Splinter TAW: Evaluation of a new tomor marker in patients with non-small cell lung cancer: CYFRA 21.1. Br. J Cancer 69, 525-528 (1994).
Sugama Y, Kitamura S, Kawai T, Ohkubo A, Hasegawa S, Kuriyama T, Kato H, Fukuoka M, Ohkawa J: Clinical usefulness of CYFRA assay in diagnosing lung cancer: Measurement of serum cytokeratinfragment. Jpn J Cancer Res 85, 1178-1184 (1994).
Petersen G, Song D, Huegle-Doerr B, Oldenbug I, Bautz EKF: Mappingof linear epitopes recognized by monoclonal antibodies with gene-fragment phage display libraies. Mol Gen Genet 249, 425-431.
Dittadi R, Barioli P, Gion M, Mione R, Barichello M, Capitanio G, Cocco G, Cazzolato G, De Biasi F, Praturlon S, Antinozzi R, Gianneo E: Standardization of assay for cytokeratin-related tumor marker CYFRA21.1 in urine samples. Clin Chemistry 42, 1634-1638 (1996).
Hoechtlen-Vollmar W, Gruber R, Bodenmueller H, Felber E, Lindemann F, Passlick, B, Schlimok G, Pantel K, Riethmueller G: Occult epithelial tumor cells detected in bone marrow by an enzyme immunoassay specific for cytokeratin 19. Int. J Cancer 70, 396-400 (1997).
Stigbrand T, Andres C, Bellanger L, Bishr Omary M, Bodenmueller H, Bonfer H, Brundell J, Einarsson R, Erlandsson A, Johansson A, Leca JF, Levi M, Meier T, Nap M, Nustad K, Seguin P, Sjoedin A, Sundstroem B, Van Dalen A, Wiebelhaus E, Wiklund B, Yrlestig L, Hilgers J: Epitope specificity of 30 monoclonal antibodies against cytokeratin antigens: The ISOBM TD5-1 Workshop. Tumor Biol 19, 132-152 (1998).