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BM5045P Monoclonal Antibody to Cytokeratin 8 - Purified

Alternate names: CK8, CYK8, Cytokeratin endo A, Cytokeratin-8, K8, KRT8, Keratin, Keratin-8, type II cytoskeletal 8

Quantity: 0.1 mg

Concentration: 1.0 mg/ml

Background: Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in epithelial tissues by at least 20 different polypeptides. They range in molecular weight between 40 kDa and 68 kDa and isoelectric pH between 4.9-7.8. The individual cytokeratin polypeptides are numbered 1 to 20.
The various epithelia in the human body usually express cytokeratins which are not only characteristic of the type of epithelium, but also related to the degree of maturation or differentiation within an epithelium.
Cytokeratin subtype expression patterns are used to an increasing extent in the distinction of different types of epithelial malignancies. The cytokeratin antibodies are not only of assistance in the differential diagnosis of tumors using immunohistochemistry on tissue sections, but are also a useful tool in cytopathology and flow cytometric assays.

Uniprot ID: P05787

NCBI: NP_002264.1

GeneID: 3856

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N

Clone: M20

Immunogen: Keratin isolated from the Human breast carcinoma cell line MCF-7

Format:
State: Liquid purified IgG fraction
Buffer System: PBS
Preservatives: 0.09% Sodium Azide

Applications:
Immunoblotting: 1/100-1/1000
Flow Cytometry.
Immunocytochemistry.
Immunohistochemistry on Frozen Tissues: 1/100-1/200 with Avidin-biotinylated Horseradish peroxidase complex ABC as detection reagent.
Immunohistochemistry on Paraffin Sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

M20 reacts with glandular epithelial cells (endocrine and exocrine) as well as mesothelial cells of the digestive, respiratory and urogenital tract and most adenocarcinomas derived from these cells.
The M20 epitope has been mapped to amino acids 353-367 on the alpha helical rod domain of Cytokeratin 8 (See Reference 10).
Species: Human, Rat, Rabbit and Mouse (most mammals).
Other species not tested.

Storage:

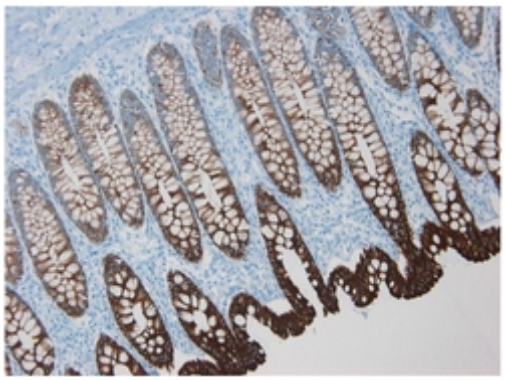
Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freeze-thaw cycles.
Shelf life: One year from despatch.

General Readings:

1. Van Muijen GN, Ruiter DJ, Warnaar SO. Coexpression of intermediate filament polypeptides in human fetal and adult tissues. Lab Invest. 1987 Oct;57(4):359-69. PubMed PMID: 3669613.
2. Van Muijen GN, Warnaar SO, Ponec M. Differentiation-related changes of cytokeratin expression in cultured keratinocytes and in fetal, newborn, and adult epidermis. Exp Cell Res. 1987 Aug;171(2):331-45. PubMed PMID: 2442018.
3. Schaafsma HE, Ramaekers FC, van Muijen GN, Ooms EC, Ruiter DJ. Distribution of cytokeratin polypeptides in epithelia of the adult human urinary tract. Histochemistry. 1989;91(2):151-9. PubMed PMID: 2472369.
4. Smedts F, Ramaekers F, Robben H, Pruszczynski M, van Muijen G, Lane B, et al. Changing patterns of keratin expression during progression of cervical intraepithelial neoplasia. Am J Pathol. 1990 Mar;136(3):657-68. PubMed PMID: 1690513.
5. Ramaekers F, van Niekerk C, Poels L, Schaafsma E, Huijsmans A, Robben H, et al. Use of monoclonal antibodies to keratin 7 in the differential diagnosis of adenocarcinomas. Am J Pathol. 1990 Mar;136(3):641-55. PubMed PMID: 1690512.
6. Schaafsma HE, Ramaekers FC, van Muijen GN, Lane EB, Leigh IM, Robben H, et al. Distribution of cytokeratin polypeptides in human transitional cell carcinomas, with special emphasis on changing expression patterns during tumor progression. Am J Pathol. 1990 Feb;136(2):329-43. PubMed PMID: 1689541.
7. Ivanyi D, Groeneveld E, Van Doornewaard G, Mooi WJ, Hageman PC. Keratin subtypes in carcinomas of the uterine cervix: implications for histogenesis and differential diagnosis. Cancer Res. 1990 Aug 15;50(16):5143-52. PubMed PMID: 1696167.
8. Wetzels RH, Kuijpers HJ, Lane EB, Leigh IM, Troyanovsky SM, Holland R, et al. Basal cell-specific and hyperproliferation-related keratins in human breast cancer. Am J Pathol. 1991 Mar;138(3):751-63. PubMed PMID: 1705754.
9. Ku NO, Gish R, Wright TL, Omary MB. Keratin 8 mutations in patients with cryptogenic liver disease. N Engl J Med. 2001 May 24;344(21):1580-7. PubMed PMID: 11372009.
10. Waseem A, Karsten U, Leigh IM, Purkis P, Waseem NH, Lane EB. Conformational changes in the rod domain of human keratin 8 following heterotypic association with keratin 18 and its implication for filament stability. Biochemistry. 2004 Feb 10;43(5):1283-95. PubMed PMID: 14756564.

Pictures:

Immunohistochemistry on Paraffin Section of Human colon



Immunohistochemistry on Frozen Section of Human colon