



Cytokeratin 4 (6B10)

CATALOG NUMBER: MUB0313P
CLONE: 6B10
SPECIES / ISOTYPE: mouse IgG1
PRODUCT FORM: purified monoclonal antibody

BACKGROUND

Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in human 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 human cytokeratins 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.

SOURCE

6B10 is a mouse monoclonal IgG1 antibody derived by fusion of SP2/0 mouse myeloma cells with spleen cells from a BALB/c mouse immunized with a cytokeratin preparation extracted from human esophagus.

PRODUCT

Each vial contains 143 µl 0.7 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

SPECIFICITY

6B10 reacts exclusively with cytokeratin 4 which is present in non-cornifying squamous epithelium, including cornea and transitional epithelium. Cells in certain ciliated pseudo-stratified epithelia and ductal epithelia of various exocrine glands are also positive for 6B10.

6B10 is useful for immunocytochemistry, immunohistochemistry on frozen and tissues, immunoblotting and flow cytometry. Optimal antibody dilution should be determined by titration;

recommended range is 1:25 – 1:200 for flow cytometry, and for immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:1000 for immunoblotting applications.

SPECIES REACTIVITY

Human, canine and feline.

STORAGE

Store at 4°C, or in small aliquots at –20°C.

REFERENCES

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2. Weikel, W., Wagner, R., and Moll, R. (1987). Characterization of subcolumnar reserve cells and other epithelia of human uterine cervix. Demonstration of diverse cytokeratin polypeptides in reserve cells, *Virchows Arch B Cell Pathol Incl Mol Pathol* 54, 98-110.
3. Ivanyi, D., Minke, J. M., Hageman, C., Groeneveld, E., and van Doornewaard, G. (1992). Patterns of expression of feline cytokeratins in healthy epithelia and mammary carcinoma cells, *Am J Vet Res* 53, 304-14.
4. Vos, J. H., van den Ingh, T. S., de Neijls, M., van Mil, F. N., Ivanyi, D., and Ramaekers, F. C. (1992). Immunohistochemistry with keratin monoclonal antibodies in canine tissues: urogenital tract, respiratory tract, (neuro-)endocrine tissues, choroid plexus and spinal cord, *J Vet Med* 39, 721-40.
5. Ivanyi, D., Minke, J. M., Hageman, C., Groeneveld, E., van Doornewaard, G., and Misdorp, W. (1993). Cytokeratins as markers of initial stages of squamous metaplasia in feline mammary carcinomas, *Am J Vet Res* 54, 1095-102.

WARNING and CAUTION

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals.

This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water.

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6. Corver, W. E., Koopman, L. A., van der Aa, J., Regensburg, M., Fleuren, G. J., and Cornelisse, C. J. (2000). Four-color multiparameter DNA flow cytometric method to study phenotypic intratumor heterogeneity in cervical cancer, *Cytometry* 39, 96-107.

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