

BM6001P**Monoclonal Antibody to Cytokeratin (basal cell) - Purified**

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 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.
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
Clone:	RCK103
Immunogen:	A mix of cell preparations containing Human cytokeratins.
Format:	State: Liquid purified IgG fraction Buffer System: PBS Preservatives: 0.09% Sodium Azide
Applications:	Western blot: 1/100-1/1000. Immunohistochemistry on Frozen tissues: 1/100-1/200 with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent. Immunocytochemistry. Immunofluorescence. Flow Cytometry (1/100-1/200). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	Clone <i>RCK103</i> is a Cytokeratin antibody recognizing (amongst others) Cytokeratin 5. This monoclonal antibody stains basal cells in combined and stratified epithelial tissues. It recognizes the stem cell population, including the so-called amplifying cells in the prostate epithelium.
Species Reactivity:	Tested: Canine, Chicken, Guinea Pig, Hamster, Human, Quail, Rabbit, Rat, Swine, Zebrafish.

Storage:

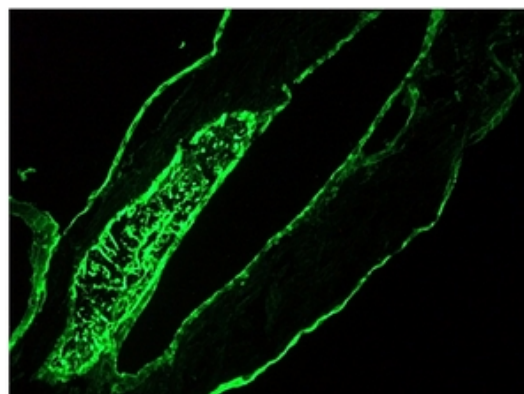
Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freeze-thaw cycles.
Shelf life: One year from despatch.

General Readings:

1. Feitz, W. F., Debruyne, F. M., Vooijs, G. P., Herman, C. J., and Ramaekers, F. C. (1986). Intermediate filament proteins as tissue specific markers in normal and malignant urological tissues, *J Urol* 136, 922-31.
2. Verhagen, A. P., Aalders, T. W., Ramaekers, F. C., Debruyne, F. M., Schalken, J. A. (1988). Differential expression of keratins in the basal and luminal compartments of rat prostatic epithelium during degeneration and regeneration, *Prostate* 13, 25-38.
3. Schaafsma, H. E., Ramaekers, F. C., van Muijen, G. N., Ooms, E. C., and Ruiter, D. J. (1989). Distribution of cytokeratin polypeptides in epithelia of the adult human urinary tract, *Histochemistry* 91, 151-9.
4. Smedts, F., Ramaekers, F., Robben, H., Pruszczynski, M., van Muijen, G., Lane, B., Leigh, I., and Vooijs, P. (1990). Changing patterns of keratin expression during progression of cervical intraepithelial neoplasia, *Am J Pathol* 136, 657-68.
5. Kuijpers, W., Tonnaer, E. L., Peters, T. A., and Ramaekers, F. C. (1991). Expression of intermediate filament proteins in the mature inner ear of the rat and guinea pig, *Hear Res* 52, 133-46.
6. Vos, J. H., van den Ingh, T. S., de Neijs, 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, choroids plexus and spinal cord, *J Vet Med* 39, 721-40.
7. Vos, J. H., van den Ingh, T. S., Ramaekers, F. C., Molenbeek, R. F., de Neijs, M., van Mil, F. N., and Ivanyi, D. (1993). The expression of keratins, vimentin, neurofilament proteins, smooth muscle actin, neuron-specific enolase, and synaptophysin in tumors of the specific glands in the canine anal region, *Vet Pathol* 30, 352-61.
8. Verhagen, A. P., Ramaekers, F. C., Aalders, T. W., Schaafsma, H. E., Debruyne, F. M., and Schalken, J. A. (1992). Colocalization of basal and luminal celltype cytokeratins in human prostate cancer, *Cancer Res* 52, 6182-7.
9. van Leenders, G., Dijkman, H., Hulsbergen-van de Kaa, C., Ruiter, D., and Schalken, J. (2000). Demonstration of intermediate cells during human prostate epithelial differentiation in situ and in vitro using triple-staining confocal scanning microscopy, *Lab Invest* 80, 1251-8.

Pictures:

Immunofluorescence staining of a 7 days old Zebrafish embryo, showing positive reactivity in epithelia lining the intestine and internal organs.



Immunohistochemistry on Frozen
Sections of Human skin.

