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Product Information

MONOCLONAL ANTI-PAN CYTOKERATIN PREDILUTED CLONES C-11, PCK-26, CY-90, KS-1A3, M20, A53-B/A2 Mouse Ascites Fluid

Product Number **C 9687**

Product Description

Monoclonal anti-Pan Cytokeratin (mouse IgG1 and IgG2a isotypes) is a mixture of monoclonal antibodies of the following clones: C-11, PCK-26, CY-90, Ks-1A3, M20, and A53-B/A2.

Monoclonal anti-Pan Cytokeratin (mixture) recognizes human cytokeratins 1, 4, 5, 6, 8, 10, 13, 18, and 19 in immunoblotting. It is a broad spectrum reagent, which reacts specifically with a wide variety of normal, reactive and neoplastic epithelial tissues. The antibody mixture reacts with simple, cornifying and non-cornifying squamous epithelia and pseudo-stratified epithelia. It does not react with non-epithelial normal human tissues. This ready-to-use mixture can be applied to methanol or acetone-fixed frozen sections, and to formalin-fixed, paraffin-embedded human tissues. Increased staining intensity is seen following proteolytic treatment of tested tissue. Similarly embedded methacarn-fixed material is also suitable for cytokeratin demonstration. The anti-Pan Cytokeratin (mixture) exhibits a wide interspecies cross-reactivity down to *Xenopus laevis*.

Intermediate-sized filaments are abundant cytoplasmic structural proteins in most vertebrate cells. Cytokeratins, a group comprising at least 29 different proteins, are characteristic of epithelial and trichocytic cells.^{1,2} Cytokeratins 1, 4, 5, 6, and 8 are members of the type II neutral-to-basic subfamily. Cytokeratin peptide 1 (68 kDa) is a secondary type II keratin expressed in cornified epithelia. Cytokeratin peptide 4 (59 kDa) is the secondary type II keratin expressed in non-cornified stratified squamous epithelia. Cytokeratin peptide 5 (58 kDa) is the primary type II keratin in stratified epithelia, while cytokeratin type 8 (52 kDa) is a major type II keratin in simple epithelia. Cytokeratin 6 (56 kDa) is a 'hyperproliferation' cytokeratin expressed in tissues with natural or pathological high turnover.

Cytokeratins 10, 13, and 18 are members of the type I acidic subfamily. Cytokeratin peptide 10 (56 kDa) is the secondary type I keratin expressed in cornified epithelia. Cytokeratin 13 (54 kDa) is the secondary type I keratin expressed in non-cornified stratified squamous epithelia. Cytokeratin 18 (45 kDa) is the primary type I keratin expressed in simple epithelial cells. Cytokeratin peptide 19 (40 kDa) is a type I keratin, which can be expressed in both simple and in broad cells of stratifying epithelia at specific sites

Monoclonal anti-cytokeratins are specific markers of epithelial cell differentiation and have been widely used as tools in tumor identification and classification. Monoclonal Anti-Pan Cytokeratin (mixture) is a broadly reactive reagent, which recognizes epitopes present in most human epithelial tissues. It facilitates typing of normal, metaplastic, and neoplastic cells. Synergy between the various components results in staining amplification. This enables identification of cells which would otherwise be stained only marginally. The mixture may aid in the discrimination of carcinomas and non-epithelial tumors such as sarcomas, lymphomas, and neural tumors. It is also useful in detecting micro-metastases in lymph nodes, bone marrow, and other tissues and for determining the origin of poorly differentiated tumors.^{1,2}

Monoclonal anti-Pan Cytokeratin (Mixture) may be used for the localization of cytokeratins using various immunochemical assays such as immunoblotting, dot blotting, and immunohistochemistry (immunofluorescent and immunoenzymatic staining). It is also useful for staining of cultured epithelial cell lines.

Reagent

The product is provided as prediluted mouse ascites fluid containing 0.07% horse serum with 15 mM sodium azide as a preservative and 0.1 µg/ml phenol red.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

The product is ready to use.

References

1. Lane, E.B., and Alexander, C.M., Sem. Canc. Biol., **1**, 165-179, (1990).
2. Moll, R., et al., Cell, **31**, 11-24 (1982).

MAM/VLE 10/02

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