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## Product Information

### Monoclonal Anti-Pan Cytokeratin

Clone PCK-26

Mouse Ascites Fluid

Product No. **C 1801**

#### Product Description

Monoclonal Anti-Pan Cytokeratin (mouse IgG1 isotype) is derived from the PCK-26 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a cytokeratin preparation from human epidermis. The isotype is determined using the Sigma ImmunoType™ Kit (Product Code No.ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Pan Cytokeratin recognizes an epitope located on the type II cytokeratins 1, 5, 6, and 8 in immunoblotting.<sup>1</sup> The PCK-26 clone produces a broad spectrum antibody which reacts specifically with a wide variety of normal, reactive and neoplastic epithelial tissues. The antibody reacts with simple, cornifying and non-cornifying squamous epithelia and pseudostratified epithelia. It does not react with non-epithelial normal human tissues. This antibody can be applied to methanol- or acetone-fixed frozen sections, and to protease-digested, formalin-fixed, paraffin-embedded human tissues. Similarly embedded methacarn-fixed material is also suitable for cytokeratin demonstration. Anti-Pan Cytokeratin cross reacts with cytokeratins from many species (e.g. rabbit, guinea pig, goat, bovine, sheep, rat, mouse, hamster, dog, cat, chicken, viper, lizard, and carp).

Monoclonal Anti-Pan Cytokeratin may be used for the localization of cytokeratins using various immunochemical assays such as immunoblotting, dot blotting, and immunohistochemistry (immunofluorescence and immunoenzymatic staining).

Intermediate-sized filaments are abundant cytoplasmic structural proteins found in most vertebrate cells. Cytokeratins, a group comprising at least 29 different proteins are characteristic of epithelial and trichocytic cells. Cytokeratin 1, 5, 6, and 8 are members of the type II neutral-to-basic subfamily. Cytokeratin peptide 1 (68 kDa) is expressed together with cytokeratin 10 in the suprabasal cell layers or the differentiation compartment of the epidermis. Its expression

increases with epidermal maturation and it is modified post-translationally in the terminally differentiated keratinocytes of the stratum corneum. 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. Monoclonal antibodies to cytokeratins are specific markers of epithelial cell differentiation and have been widely used as tools in tumor identification and classification. Monoclonal Anti-Pan Cytokeratin is a broadly reactive group-type antibody which recognizes an epitope present in most human epithelial tissues. It facilitates the typing of normal, metaplastic and neoplastic cells and it may aid in the discrimination of carcinomas and non-epithelial tumors such as sarcomas, lymphomas and neural tumors. It is also useful in detecting micrometastases in lymph nodes and other tissues and for determining the origin of poorly differentiated tumors.<sup>1,2</sup>

#### Reagents

The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

#### Precautions and Disclaimer

Sodium Azide is considered highly toxic and highly reactive under certain conditions. Read the Material Safety Data Sheet carefully before use.

#### Product Profile

The minimum antibody titer of 1:300 was determined by indirect immunofluorescent staining of protease-digested, formalin-fixed, paraffin-embedded sections of human or animal tissues.

In order to obtain best results in different techniques and preparations, it is recommended that each individual user determine their optimum working dilutions by titration assay.

#### **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.

#### **References**

1. Moll, R., et al, Cell, **31**, 11 (1981).
2. Lane, E., and Alexander, C., Sem. Canc. Biol., **1**, 165 (1990).

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