3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Monoclonal Anti-Cytokeratin Peptide 4
clone 6B10
produced in mouse, ascites fluid

Catalog Number **C5176**

Product Description

Monoclonal Anti-Cytokeratin Peptide 4 (mouse IgG1 isotype) is derived from the 6B10 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a cytokeratin preparation purified from human esophagus.[1] The isotype is determined by a double diffusion immunoassay using the Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Cytokeratin Peptide 4[1] recognizes the 59 kDa band in immunoblotting. It reacts specifically with human non-cornified squamous epithelium[2] (e.g. exocervix, esophagus, cornea). Ciliated pseudostratified epithelium of bronchi is weakly stained. Ducts of skin sweat glands and prostate are focally stained. Some endocervical columnar cells may also react with the antibody. This antibody is reactive with methanol or acetone fixed frozen sections, and with protease-digested formalin fixed paraffin embedded human tissues. Similarly embedded methacarn fixed material is also suitable for cytokeratin peptide 4 demonstration. Monoclonal Anti-Cytokeratin Peptide 4 cross reacts with cytokeratin from many mammalian species (e.g. rabbit, guinea pig, goat, sheep, hamster, dog and cat).

Intermediate filaments are abundant cytoplasmic structural proteins in most vertebrate cells. Cytokeratins, a group comprised of at least 29 different proteins are characteristic of epithelial and trichocytic cells. Cytokeratin Peptide 4 is a member of the type II, neutral-to-basic subfamily. It is a 59 kDa polypeptide differentially expressed in various human tissues. Cytokeratin Peptide 4 can be detected by biochemical or immunohistochemical means in adult non-cornified squamous epithelium such as that of the superficial and intermediate cells of the esophagus, exocervix, tongue, vagina, larynx,pharynx, epiglottis, and anus as well as in the superficial cells of the cornea. In addition, its presence was demonstrated in suprabasal cells of the urinary bladder transitional epithelium, in single cells and cell groups of sweat glands and prostatic ducts and in cylindrical ciliated bronchial cells.

Cytokeratin Peptide 4 may be detected in squamous cell carcinomas derived from several non-cornified stratified epithelia. Monoclonal anti-cytokeratins are specific markers of epithelial cell differentiation and have been widely used as tools in tumor identification and classification. Monoclonal Anti-Cytokeratin Peptide 4 is a chain specific antibody which may facilitate typing of normal, metaplastic and neoplastic cells.[3,4]

Monoclonal Anti-Cytokeratin Peptide 4 may be used for the localization of cytokeratin peptide 4 using various immunochemical assays such as immunoblotting, dot blotting and immunohistochemistry (immunofluorescence or immunoenzymatic staining).

Reagents

Supplied as ascites fluid with 15 mM sodium azide as a preservative

Precautions

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Product Profile

Indirect immunofluorescence: a minimum antibody titer of 1:300 is determined using protease digested, formalin fixed, paraffin embedded sections of human or animal tissues.

Note: 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

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

References

1. Van Muijen, G., et al., *Exp. Cell Res*., **162**, 97 (19-86).
2. Leube, R., et al., *J. Cell Biol*., **106**, 1249 (1988).
3. Oosterwijk, E., et al., *J. Histochem. Cytochem*., **38**, 385 (1990).
4. Smedts, F., et al, *Am. J. Pathol*., **136**, 657 (1990).

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