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DM189 Monoclonal Antibody to Cytokeratin 8 (+ KRT18) - Ascites

Alternate names: CK8, CYK8, Cytokeratin endo A, Cytokeratin-8, K8, KRT8, Keratin, Keratin-8, type II cytoskeletal 8

Quantity: 1 ml

Background: Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in 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 cytokeratin polypeptides 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.
Cytokeratin 8 belongs to the type B (basic) subfamily of high molecular weight keratins and exists in combination with Cytokeratin 18 (type A; acidic subfamily of low molecular weight keratins).

Uniprot ID: P05787

NCBI: NP_002264

GeneID: 3856

Host / Isotype: Mouse / IgG2a

Clone: 5D3

Immunogen: Isolated from human breast cancer carcinoma cell line MCF-7.
Epitope has been mapped to aa 353-367 on alpha helical rod domain of keratin K8 (See Waseem et al., 2004).

Format: **State:** Liquid Ascites
Preservatives: 0.09% Sodium Azide

Applications: **Cell Suspensions.**
Immunohistochemistry on Frozen Sections.
Immunohistochemistry on Paraffin Sections (After Microwave treatment, Proteolytic treatment optional).
Immunoblotting (Western): Clone NCL5D3 is directed against the the 52.2 kDa keratin K8 (originally reported also to 45 kDa keratin K18; formerly also designated cytokeratins according to the Moll-catalogue).
Working Dilution: 1/5-1/10, dilute immediately before use.
Dilution Buffer: PBS with 1% BSA and 0.09% Sodium Azide.
Recommended Positive Control: Glandular epithelium.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: The antibody recognizes all simple epithelia including glandular epithelia.
It does not react with stratified squamous epithelium.
Useful for the differentiation between carcinomas and lymphomas.

Species Reactivity: **Tested:** Human. No significant cross-reaction with Mouse and Rat.

Storage: Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:

1. Shadforth AM, Suzuki S, Theodoropoulos C, Richardson NA, Chirila TV, Harkin DG. A Bruch's membrane substitute fabricated from silk fibroin supports the function of retinal pigment epithelial cells in vitro. J Tissue Eng Regen Med. 2015 Oct 9. doi: 10.1002/term.2089. PubMed PMID: 26449636.

General Readings:

1. Angus B, Purvis J, Stock D, Westley BR, Samson AC, Routledge EG, et al. NCL-5D3: a new monoclonal antibody recognizing low molecular weight cytokeratins effective for immunohistochemistry using fixed paraffin-embedded tissue. J Pathol. 1987 Dec;153(4):377-84. PubMed PMID: 2448441.
2. Waseem A, Karsten U, Leigh IM, Purkis P, Waseem NH, Lane EB. Conformational changes in the rod domain of human keratin 8 following heterotypic association with keratin 18 and its implication for filament stability. Biochemistry. 2004 Feb 10;43(5):1283-95. PubMed PMID: 14756564.
3. Angus B, Kiberu S, Purvis J, Wilkinson L, Horne CH. Cytokeratins in cervical dysplasia and neoplasia: a comparative study of immunohistochemical staining using monoclonal antibodies NCL-5D3, CAM 5.2, and PKK1. J Pathol. 1988 May;155(1):71-5. PubMed PMID: 2454306.
4. Kasper M, Rudolf T, Verhofstad AA, Schuh D, Müller M. Heterogeneity in the immunolocalization of cytokeratin-specific monoclonal antibodies in the rat lung: evaluation of three different alveolar epithelial cell types. Histochemistry. 1993 Jul;100(1):65-71. PubMed PMID: 7693628.
5. Martín CA, Salomoni PD, Badrán AF. Cytokeratin immunoreactivity in mouse tissues: study of different antibodies with a new detection system. Appl Immunohistochem Mol Morphol. 2001 Mar;9(1):70-3. PubMed PMID: 11277418.