

PRODUCT INFORMATION



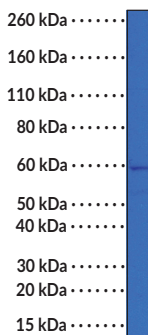
Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226)

Item No. 32190

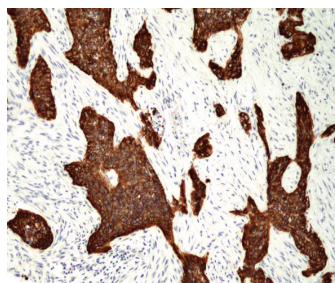
Overview and Properties

Contents:	This vial contains 100 μ l or 1 ml of protein A-affinity purified monoclonal antibody.
Synonyms:	CK-5, Keratin-5, Keratin, Type II Cytoskeletal 5, KRT5
Immunogen:	Peptide from the C-terminal region of human cytokeratin 5
Cross Reactivity:	(+) Cytokeratin 5; (-) Cytokeratin 6
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM226
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:400 for IHC and 1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

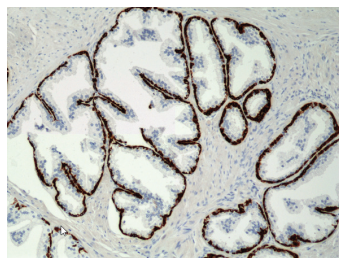
Images



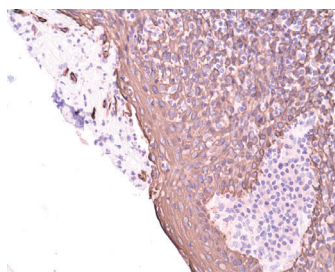
WB of A431 cell lysates using Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung squamous cell carcinoma tissue section using Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226) at a 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human prostate tissue section using Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226) at a 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue section using Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226) at a 1:100 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Cytokeratin 5 is a type II epithelial intermediate filament protein.¹ It is composed of a central rod containing four α -helical domains, which are important for self-assembly, and non-helical head and tail domains at the N- and C-termini, respectively. Cytokeratin 5 is expressed in basal keratinocytes in the epidermis and is an integral component of the epithelial cell cytoskeleton.² It dimerizes with the type I epithelial intermediate filament protein cytokeratin 14 *via* heptad repeats in the central rod domain to form a network of filament bundles throughout the cytoplasm.^{1,3} Cytokeratin 5 interacts with β -catenin in estrogen receptor-positive breast cancer cells and promotes the reduction of β -catenin levels at the cell surface *in vitro* and in a patient-derived xenograft (PDX) mouse model of breast cancer.⁴ The expression of cytokeratin 5 in cancer cells predicts poor prognosis in estrogen receptor-positive breast cancer.⁴ Mutations in the tail or head domains of cytokeratin 5 induce cytoskeletal abnormalities and keratin aggregation and are associated with epidermolysis bullosa simplex (EBS) while head domain mutations are associated with Dowling-Degos disease.¹⁻³ Cayman's Cytokeratin 5 (C-Term; human) Rabbit Monoclonal Antibody (Clone RM226) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Gu, L.-H. and Coulombe, P.A. Keratin function in skin epithelia: A broadening palette with surprising shades. *Curr. Opin. Cell Biol.* **19(1)**, 13-23 (2007).
2. Atkinson, S.D., McGilligan, V.E., Liao, H., *et al.* Development of allele-specific therapeutic siRNA for keratin 5 mutations in epidermolysis bullosa simplex. *J. Invest. Dermatol.* **131(10)**, 2079-2086 (2011).
3. Chan, Y.M., Yu, Q.C., LeBlanc-Straceski, J., *et al.* Mutations in the non-helical linker segment L1-2 of keratin 5 in patients with Weber-Cockayne epidermolysis bullosa simplex. *J. Cell Sci.* **107(Pt 4)**, 765-774 (1994).
4. McGinn, O., Ward, A.V., Fettig, L.M., *et al.* Cytokeratin 5 alters β -catenin dynamics in breast cancer cells. *Oncogene* **39(12)**, 2478-2492 (2020).

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