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BM2298P Monoclonal Antibody to Cytokeratin 10 - Purified

Alternate names:	CK-10, CK10, Cytokeratin-10, K10, KPP, KRT10, Keratin, Keratin-10, Type I Cytoskeletal 10
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in human 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 human cytokeratins 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.
Uniprot ID:	P13645
NCBI:	NP_000412.3
GeneID:	3858
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
Clone:	RKSE60
Immunogen:	Cytokeratins from the Human epidermis
Format:	**State:** Liquid purified IgG fraction **Buffer System:** PBS containing 0.09% Sodium Azide as preservative.
Applications:	**Immunoblotting:** 1/100-1/1000. **Flow Cytometry:** 1/100-1/200. **Immunocytochemistry.** **Immunohistochemistry on Frozen Sections:** 1/100-1/200 (with Avidin-Biotinylated Horseradish peroxidase complex (ABC) as detection reagent). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	*RKSE60* reacts exclusively with Cytokeratin 10 which is present in keratinizing stratified epithelia and in differentiated areas of highly differentiated squamous cell carcinomas.
Species Reactivity:	**Tested:** Canine, Human, Mouse, Rat, Swine, Zebrafish.

Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freeze-thaw cycles.
Shelf life: One year from despatch.

General Readings:

1. Ramaekers FC, Puts JJ, Moesker O, Kant A, Huysmans A, Haag D, et al. Antibodies to intermediate filament proteins in the immunohistochemical identification of human tumours: an overview. Histochem J. 1983 Jul;15(7):691-713. PubMed PMID: 6350235.
2. Puts JJ, Moesker O, Kenemans P, Vooijs GP, Ramaekers FC. Expression of cytokeratins in early neoplastic epithelial lesions of the uterine cervix. Int J Gynecol Pathol. 1985;4(4):300-13. PubMed PMID: 2417968.
3. Broers JL, Carney DN, Klein Rot M, Schaart G, Lane EB, Vooijs GP, et al. Intermediate filament proteins in classic and variant types of small cell lung carcinoma cell lines: a biochemical and immunochemical analysis using a panel of monoclonal and polyclonal antibodies. J Cell Sci. 1986 Jul;83:37-60. PubMed PMID: 2433295.
4. Ramaekers F, Huysmans A, Schaart G, Moesker O, Vooijs P. Tissue distribution of keratin 7 as monitored by a monoclonal antibody. Exp Cell Res. 1987 May;170(1):235-49. PubMed PMID: 2436934.
5. Van Muijen GN, Warnaar SO, Ponec M. Differentiation-related changes of cytokeratin expression in cultured keratinocytes and in fetal, newborn, and adult epidermis. Exp Cell Res. 1987 Aug;171(2):331-45. PubMed PMID: 2442018.
6. Bijman JT, Wagener DJ, van Rennes H, Wessels JM, Ramaekers FC, van den Broek P. Modulation of placental alkaline phosphatase activity and cytokeratins in human HN-1 cells by butyrate, retinoic acid, catecholamines and histamine. Br J Cancer. 1987 Aug;56(2):127-32. PubMed PMID: 2444242.
7. van Erp PE, Rijzewijk JJ, Boezeman JB, Leenders J, de Mare S, Schalkwijk J, et al. Flow cytometric analysis of epidermal subpopulations from normal and psoriatic skin using monoclonal antibodies against intermediate filaments. Am J Pathol. 1989 Nov;135(5):865-70. PubMed PMID: 2479273.
8. Ramaekers F, van Niekerk C, Poels L, Schaafsma E, Huijsmans A, Robben H, et al. Use of monoclonal antibodies to keratin 7 in the differential diagnosis of adenocarcinomas. Am J Pathol. 1990 Mar;136(3):641-55. PubMed PMID: 1690512.
9. Schaafsma HE, Ramaekers FC, van Muijen GN, Lane EB, Leigh IM, Robben H, et al. Distribution of cytokeratin polypeptides in human transitional cell carcinomas, with special emphasis on changing expression patterns during tumor progression. Am J Pathol. 1990 Feb;136(2):329-43. PubMed PMID: 1689541.
10. Smedts F, Ramaekers F, Robben H, Pruszczynski M, van Muijen G, Lane B, et al. Changing patterns of keratin expression during progression of cervical intraepithelial neoplasia. Am J Pathol. 1990 Mar;136(3):657-68. PubMed PMID: 1690513.
11. Franssen, M.E.J., Boezeman, J.B.M., van de Kerkhof, P.C.M. and van Erp, P.E.J. (2003). Monitoring hyperproliferative disorders in human skin: flow cytometry of changing cytokeratin expression, Cytometry Part B (Clinical Cytometry) 57B, 32-39.

Pictures:

Figure 3. Immunohistochemistry on paraffin section of human skin.

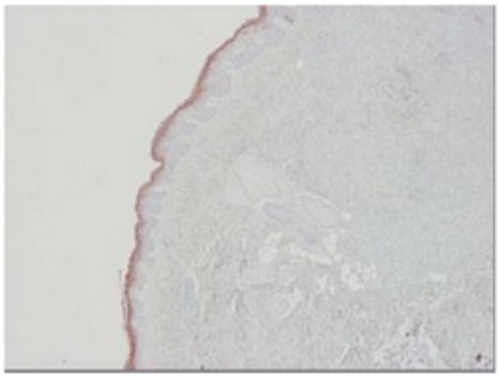


Figure 4. Immunofluorescence staining of a 7 days old zebrafish embryo.

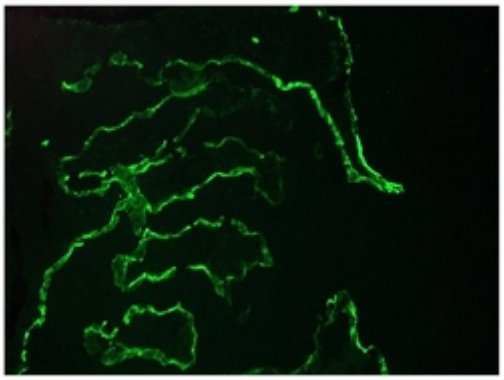
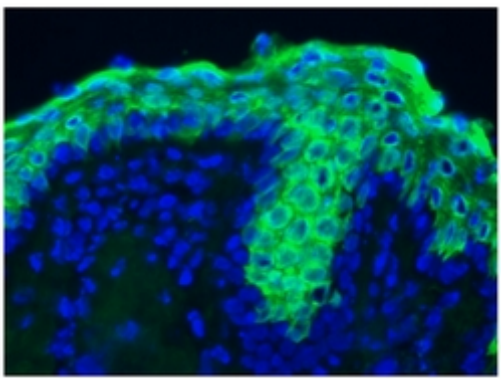


Figure 2. Immunohistochemistry on frozen section of swine skin: positive staining of the keratinizing layer (higher magnification compared to Figure 1)



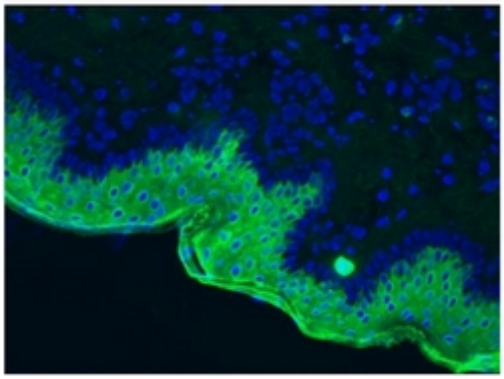


Figure 1. Immunohistochemistry on frozen section of swine skin: positive staining of the keratinizing layer.