

Datasheet: MCA890F

Description:	MOUSE ANTI HUMAN CYTOKERATIN 14:FITC
Specificity:	CYTOKERATIN 14
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	LL002
Isotype:	lgG3
Quantity:	0.1 mg

## **Product Details**

#### **Applications**

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	•			Neat - 1/10
Immunofluorescence	-			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) Membrane permeabilization is required for this application. The use of Leucoperm (Product Code BUF09) is recommended for this purpose.

Target Species	Human				
Species Cross	Reacts with: Elep	hant, Dog, Pig, Lion			
Reactivity	<b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.				
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid				
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)		
	FITC	490	525		

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	<ul><li>0.09% Sodium Azide (NaN<sub>3</sub>)</li><li>1% Bovine Serum Albumin</li></ul>
Approx. Protein Concentrations	IgG concentration 0.1mg/ml
Immunogen	Last 15 C-terminal residues of human cytokeratin 14 conjugated to thyroglobulin.
External Database Links	UniProt: P02533 Related reagents  Entrez Gene: 3861 KRT14 Related reagents
RRID	AB_872024
Specificity	Mouse anti Human Cytokeratin 14 antibody, clone LL002 recognizes cytokeratin 14, a type I intermediate filament, expressed by stratifying epithelial cells and can be used to distinguish these cell types from simple epithelial cells, which do not express cytokeratin 14.  Mouse anti cytokeratin 14, clone LL002 has been reported to be suitable for use in Western blotting (Alam et al. 2011)
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
References	<ol> <li>Wetzels, R.H. et al. (1989) Detection of basement membrane components and basal cell keratin 14 in noninvasive and invasive carcinomas of the breast. Am J Pathol. 134 (3): 571-9.</li> <li>Lane, E.B. &amp; Alexander, C.M. (1990) Use of keratin antibodies in tumor diagnosis. Semin Cancer Biol. 1 (3): 165-79.</li> <li>Munz, B. et al. (1999) Overexpression of activin A in the skin of transgenic mice reveals new activities of activin in epidermal morphogenesis, dermal fibrosis and wound repair. EMBO J. 18: 5205-15.</li> <li>Stumpf, P. &amp; Welsch, U. (2002) Cutaneous eccrine glands of the foot pads of the rock hyrax (Procavia capensis., Hyracoidea, Mammalia.). Cells Tissues Organs. 171 (2-3): 215-26.</li> <li>Stumpf, P. et al. (2004) Cutaneous eccrine glands of the foot pads of the small Madagascan tenrec ( Echinops telfairi, Insectivora, Tenrecidae.): skin glands in a primitive mammal. Cell Tissue Res. 315 (1): 59-70.</li> <li>Varley, C.L. et al. (2004) Activation of peroxisome proliferator-activated receptor-gamma</li> </ol>

stem cells. <u>J Cell Sci. 117 (Pt 16): 3539-45.</u>

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reverses squamous metaplasia and induces transitional differentiation in normal human

urothelial cells. Am J Pathol. 164: 1789-98.

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- 9. Collins, A.T. *et al*et al. (2005) Prospective identification of tumorigenic prostate cancer stem cells. <u>Cancer Res. 65: 10946-51.</u>
- 10. Matos, A.J. *et al.* (2006) Detection of lymph node micrometastases in malignant mammary tumours in dogs by cytokeratin immunostaining. <u>Vet Rec. 158: 626-30.</u>
- 11. Faustino, A.M. & Dias Pereira, P. (2007) A salivary malignant myoepithelioma in a dog. Vet J. 173 (1): 223-6.
- 12. Holliday, D. *et al.* (2009) Novel multicellular organotypic models of normal and malignant breast: tools for dissecting the role of the microenvironment in breast cancer progression. <u>Breast Cancer Res. 11: R3</u>
- 13. Eastman, R. .Jr. *et al.* (2010) Fibroblast growth factor-10 signals development of von Brunn's nests in the exstrophic bladder. <u>Am J Physiol Renal Physiol.299:F1094-110.</u>
- 14. Takahashi, C. *et al.* (2010) Newly established cell lines from mouse oral epithelium regenerate teeth when combined with dental mesenchyme. <u>In Vitro Cell Dev Biol Anim.</u> 46: 457-68.
- 15. Alam H *et al.* (2011) Loss of keratins 8 and 18 leads to alterations in  $\alpha6\beta4$ -integrin-mediated signalling and decreased neoplastic progression in an oral-tumour-derived cell line. J Cell Sci. 124 (Pt 12): 2096-106.
- 16. Abdeen, S.K. *et al.* (2011) Wwox inactivation enhances mammary tumorigenesis. Oncogene. 30: 3900-6.
- 17. Clark, S.E. *et al.* (2011) Molecular subtyping of DCIS: heterogeneity of breast cancer reflected in pre-invasive disease. Br J Cancer. 104: 120-7.
- 18. Turner, A. *et al.* (2011) Transplantation of autologous differentiated urothelium in an experimental model of composite cystoplasty. <u>Eur Urol. 59: 447-54.</u>
- 19. Mwase, M. *et al.* (2013) Cutaneous Squamous Cell Carcinoma presenting as a Wound with Discharging Sinus Tracts in a Wild African Lion (*Panthera leo*). <u>J Comp Pathol. pii:</u> S0021-9975(13)00106-0.
- 20. Caceres, S. *et al.* (2015) Establishment and Characterization of a New Cell Line of Canine Inflammatory Mammary Cancer: IPC-366. <u>PLoS One. 10 (3): e0122277.</u>
- 21. Honda, K. & Tomooka, Y. (2016) Nerve-independent and ectopically additional induction of taste buds in organ culture of fetal tongues. *In Vitro* Cell Dev Biol Anim. 52 (9): 911-9.
- 22. Ogihara, K. & Madarame, H. (2020) Pancreatic adenosquamous carcinoma with invasion to the spleen in a cat. <u>J Vet Med Sci. 82 (9): 1395-9.</u>
- 23. Hustler, A. *et al.* (2018) Differential transcription factor expression by human epithelial cells of buccal and urothelial derivation. <u>Exp Cell Res. 369 (2): 284-294.</u>
- 24. Sakai, Y. *et al.* (2019) A clonal stem cell line established from a mouse mammary placode with ability to generate functional mammary glands. <u>In Vitro Cell Dev Biol Anim.</u> 55 (10): 861-71.
- 25. Yasuno, K. *et al.* (2013) Atypical canine mammary adenoma characterized by cystic ducts comprising a single layer of basaloid cells with myoepithelial differentiation. <u>J Vet Med Sci. 75 (8): 1095-9.</u>

**Further Reading** 

1. Moll, R. *et al.* (1982) The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells. Cell. 31 (1): 11-24.

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.
	Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA890F">https://www.bio-rad-antibodies.com/SDS/MCA890F</a> 10041
Regulatory	For research purposes only

# **Related Products**

## **Recommended Useful Reagents**

LEUCOPERM (BUF09)
HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739

Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody\_sales\_us@bio-rad.com

Email: antibody\_sales\_uk@bio-rad.com

Email: antibody\_sales\_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M423276:231010'

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