

Datasheet: MCA890T

Description:	MOUSE ANTI HUMAN CYTOKERATIN 14
Specificity:	CYTOKERATIN 14
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	LL002
Isotype:	IgG3
Quantity:	20 µg

Product Details

RRID AB_323916

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 www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (2)	▪			1/200
ELISA			▪	
Immunoprecipitation			▪	
Immunofluorescence	▪			

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

(1) **Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

(2) **This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

Target Species Human

Species Cross Reactivity Reacts with: Elephant, Dog, Pig, Lion
N.B. Antibody reactivity and working conditions may vary between species.

Product Form Purified IgG - liquid

Preparation Purified IgG prepared by ion exchange chromatography from tissue culture supernatant

Buffer Solution Phosphate buffered saline

Preservative Stabilisers 0.09% Sodium Azide

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Last 15 C-terminal residues of human cytokeratin 14 conjugated to thyroglobulin.
External Database Links	<p>UniProt: P02533 Related reagents</p> <p>Entrez Gene: 3861 KRT14 Related reagents</p>
Specificity	<p>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.</p> <p>Mouse anti cytokeratin 14, clone LL002 has been reported to be suitable for use in Western blotting (Alam et al. 2011)</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul.
Histology Positive Control Tissue	Skin
References	<ol style="list-style-type: none"> 1. Purkis, P.E. <i>et al.</i> (1990) Antibody markers of basal cells in complex epithelia. J Cell Sci. 97 (Pt 1): 39-50. 2. Lane, E.B. & Alexander, C.M. (1990) Use of keratin antibodies in tumor diagnosis. Semin Cancer Biol. 1 (3): 165-79. 3. Wetzels, R.H. <i>et al.</i> (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. 4. Moll, R. <i>et al.</i> (1982) The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells. Cell. 31 (1): 11-24. 5. Richardson, G.D. <i>et al.</i> (2004) CD133, a novel marker for human prostatic epithelial stem cells. J Cell Sci. 117 (Pt 16): 3539-45. 6. Holliday, D. <i>et al.</i> (2009) Novel multicellular organotypic models of normal and malignant breast: tools for dissecting the role of the microenvironment in breast cancer progression. Breast Cancer Res. 11: R3 7. Eastman, R. .Jr. <i>et al.</i> (2010) Fibroblast growth factor-10 signals development of von Brunn's nests in the exstrophic bladder. Am J Physiol Renal Physiol.299:F1094-110. 8. Stumpf, P and Welsch, U. (2004) Secretory and defensive functions of the duct system of the lactating mammary gland of the African elephant (<i>Loxodonta africana</i>, Proboscidea) Zoomorphology 123:155-67 9. Alam H <i>et al.</i> (2011) Loss of keratins 8 and 18 leads to alterations in α6β4-integrin-mediated signalling and decreased neoplastic progression in an oral-tumour-derived cell line. J Cell Sci. 124 (Pt 12): 2096-106. 10. Clark, S.E. <i>et al.</i> (2011) Molecular subtyping of DCIS: heterogeneity of breast cancer reflected in pre-invasive disease. Br J Cancer. 104: 120-7. 11. Hale, L.P. and Markert, M.L. (2004) Corticosteroids regulate epithelial cell differentiation and Hassall body formation in the human thymus. J Immunol. 172: 617-24. 12. Takahashi, C. <i>et al.</i> (2010) Newly established cell lines from mouse oral epithelium regenerate teeth when combined with dental mesenchyme. In Vitro Cell Dev Biol Anim. 46: 457-68.

13. Faustino, A.M. *et al.* (2007) A salivary malignant myoepithelioma in a dog. [Faustino, A.M. and Dias Pereira, P.](#)
14. Collins, A.T. *et al.* (2005) Prospective identification of tumorigenic prostate cancer stem cells. [Cancer Res. 65: 10946-51.](#)
15. Varley, C.L. *et al.* (2004) Activation of peroxisome proliferator-activated receptor-gamma reverses squamous metaplasia and induces transitional differentiation in normal human urothelial cells. [Am J Pathol. 164: 1789-98.](#)
16. Abdeen, S.K. *et al.* (2011) Wwox inactivation enhances mammary tumorigenesis. [Oncogene. 30: 3900-6.](#)
17. Matos, A.J. *et al.* (2006) Detection of lymph node micrometastases in malignant mammary tumours in dogs by cytokeratin immunostaining. [Vet Rec. 158: 626-30.](#)
18. Turner, A. *et al.* (2011) Transplantation of autologous differentiated urothelium in an experimental model of composite cystoplasty. [Eur Urol. 59: 447-54.](#)
19. 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.](#)
20. Mwise, M. *et al.* (2013) Cutaneous Squamous Cell Carcinoma presenting as a Wound with Discharging Sinus Tracts in a Wild African Lion (*Panthera leo*). [J Comp Pathol. pii: S0021-9975\(13\)00106-0.](#)
21. Caceres, S. *et al.* (2015) Establishment and Characterization of a New Cell Line of Canine Inflammatory Mammary Cancer: IPC-366. [PLoS One. 10 \(3\): e0122277.](#)
22. 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.](#)
23. Hustler, A. *et al.* (2018) Differential transcription factor expression by human epithelial cells of buccal and urothelial derivation. [Exp Cell Res. 369 \(2\): 284-294.](#)

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10040 available at:
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG3 (HCA039...)	FITC , HRP
Goat Anti Mouse IgG (STAR76...)	RPE

Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@680](#),
[DyLight@800](#), [FITC](#), [HRP](#)

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