

MS Validated Antibodies GmbH Bergstedter Chaussee 62a 22395 Hamburg, Germany Tel: +49 (0) 40 89 72 55 81 E-Mail:info@ms-validatedantibodies.com Website: ms-validatedantibodies.com

# Anti-Cytokeratin 10 Antibody MSVA-610M / Recombinant Mouse monoclonal

Human SwissProt	P13645
Human Gene Symbol	KRT10
Synonyms	BCIE, BIE, EHK, Keratin Type I Cytoskeletal 10, KRT10
Specificity	Cytokeratin 10
Immunogen	Recombinant human KRT13 protein
lsotype	Mouse / IgG1, kappa
Species Reactivity	Human
Localization	Cytoplasmic

Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non- hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	In normal skin, all suprabasal cells should show strong cytoplasmic staining, while the basal cell layer remains KRT10 negative or showsn only minmal staining.
Negative Control	In the colon, all epithelial, inflammatory, stromal and muscle cells must not show any KRT10 staining.



Strong Cytokeratin 10 immunostaining in a squamous cell carcinoma of the vulva. The basal cell layers are largely unstained. Absence of KRT10 staining in non-keratinizing squamous epithelium of the esophagus. Strong KRT10 staining in all suprabasal cell layers of the keratinizing squamous epithelium of the skin and in associated sebaceous glands+++ and hair follicles. The basal cell layer is strictly KRT10 negative.

### Biology

Cytokeratin 10 (CK10), also termed keratin 10 (KRT10) is a type I acidic high molecular weight keratin protein encoded by the KRT10 gene located 17q21. It dimerizes with the type I keratin 1 and forms intermediate filaments that primarily shape the cytoskeleton of specific epithelial cells. In these cells, KRT10 is part of the cytoskeletal scaffold which contributes to the cell architecture and provides the cells with the ability to withstand mechanical stress. Mutations in CK10 can cause epidermolytic hyperkeratosis or bullous congenital ichthyosiform erythroder ma of Brocq. In normal tissues, KRT10 is always strongly expressed in all supra-basal cell layers of the keratinizing squamous epithelium of the skin as well as in associated sebaceous glands+++ and hair follicles. The basal cell laver of the epidermis is strictly KRT10 negative. Strong KRT10 expression is also observed in a fraction of cells in squamous epithelium of tonsil crypts and the central areas of corpuscles of Hassall's+++. In contrast, KRT10 is mostly not seen in non-keratinizing squamous epithelium of different sites of origin such as ectocervix, surface of the tonsil, esophagus, oral cavity and lip. However, a variable fraction of suprabasal cells or groups of cells in in these non-keratinizing squamous epithelia may of show weak, moderate, or even strong KRT10 expression in individual samples. Among tumors, KRT10 immunostaining almost exclusively occurs in squamous cell carcinomas of various sites of origin. The rate of KRT10 positive cases may vary depending on the histologic tumor grade. Some of the KRT10 positive squamous cell carcinomas show - similar to the situation in normal skin - absence of expression in the basal cell layers.

## **Potential Research Applications**

The diagnostic utility of reduced CK10 expression in the skin is not known. -The diagnostic utility of CK10 neo-expression in non-keratinizing squamous epithelium of ectocervix, esophagus, oral cavity and lip is not known. -The prognostic role of CK10 expression in squamous cell carcinoma is unknown.

#### **Protocol Suggestions**

Dilution: 1:150; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

## Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Not for resale without express authorization.

## Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



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Adrenal gland



Appendix, mucosa



Breast



Colon descendens, mucosa



Ektocervix - KRT10 is mostly absent in non-keratinizing squamous epithelium. It can occur, however, in a variable fraction of suprabasal cells in these tissues



Skin - KRT10 is strongly positive in all suprabasal cell layers of the epidermis but the basal cell layer is strictly KRT10 negative



Tonsil - Strong KRT10 expression in a small fraction of cells of the squamous epithelium of tonsil krypts



Kidney, cortex



Liver



Prostate



Spleen

Tonsil, surface epithelium - KRT10 is

mostly not seen in non-keratinizing squamous epithelium



Stomach, corpus



Tyroid gland



Thymus - Strong KRT10 expression in the central areas of corpuscles of Hassall's



Uterus, myometrium