

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 15 Antibody MSVA-615M / Mouse monoclonal

Human SwissProt	P19012
Human Gene	KRT15
Symbol	
Synonyms	CK15; Cytokeratin 15; K1CO; Ka15; Keratin 15 basic; Keratin 15
	beta; Keratin complex 1 acidic gene 15; Keratin type I
	cytoskeletal 15; KRT15; KRTB; KRTL15; Type I cytoskeletal 15;
	Type I keratin Ka15
Specificity	Cytokeratin 15
Immunogen	Recombinant human KRT15 protein
lsotype	Mouse / IgG2b
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 the tonsil, all cells of the surface squamous epithelium and most squamous cells of the crypts should show strong KRT15 staining.
Negative Control	In the tonsil, all lymphocytes and blood vessels must not show any KRT15 staining.



Strong cytokeratin 15 immunostaining of all cells of a laryngeal squamous cell carcinoma.

Strong cytoplasmic KRT15 staining of basal cells in the prostate.

Strong KRT15 staining of all cell layers of the nonkeratinizing squamous epithelium of the tonsil surface. Lymphocytes are KRT15 negative.

## Biology

Cytokeratin 15 (CK15) also termed keratin 15 (KRT15) is a type I acidic high molecular weight keratin protein encoded by the KRT15 gene located 17q21.2. It dimerizes with the basic type II keratin 4 and forms intermediate filaments that primarily shape the cytoskeleton of specific epithelial cells. In these cells, KRT15 is part of the cytoskeletal scaffold which contributes to the cell architecture and provides the cells with the ability to withstand mechanical stress. KRT15 can be downregulated in activated keratinocytes. In normal tissues, a strong KRT15 immunostaining occurs in all cell layers of all non-keratinizing and keratinizing squamous epithelia including hair follicles and sebaceous glands, acinar cells of the breast, urothelium (stronger staining in lower half as compared to upper half), myoepithelial cells and basal cells of excretion ducts of all salivary and bronchial glands. In the prostate, epididymis, and the respiratory epithelium. KRT15 immunostaining is strong in all basal cells and occasionally also occurs in luminal epithelial cells. Only few basal cells are KRT15 positive in seminal vesicles. In the thymus, KRT15 is strongly expressed in corpuscles of Hassall's and medullary thymic epithelial cells but weaker in cortical thymic epithelial cells. KRT15 immunostaining can also be seen in the syncytiotrophoblast of the placenta (generally weak and more common in first trimenon than in mature placenta), few cells of collecting ducts of the kidney, and a fraction of epithelial cells in the adenohypophysis. Among tumors, KRT15 immunostaining predominantly occurs in squamous cell carcinomas of various sites of origin. At lower frequencies and lower levels, KRT15 expression can also be seen in other tumor types.

## **Potential Research Applications**

-Studies have suggested that reduced expression in squamous epithelium may be found in case of dysplasia or other pathologic changes. Further investigations on this subject are needed.

-The prognostic role of KRT15 expression in squamous cell carcinoma is unknown.

#### **Protocol Suggestions**

**Dilution: 1:50 ; 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.



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



Appendix, mucosa



Breast - In the breast, a strong KRT15 immunostaining is seen in acinar but not myoepithelial cells



Kidney, cortex



Bronchus, mucosa - In the respiratory epithelium, a strong KRT15 immunostaining is seen in basal cells



Liver - Liver Pigment staining



Ektocervix - A strong KRT15 immunostaining is always found in all cell layers of all non-keratinizing and keratinizing squamous epithelium



Lymph node



Skin - A strong KRT15 immunostaining is found in all cell layers of all non-keratinizing and keratinizing squamous epithelium (except keratin layer)



Urinary bladder, urothelium - KRT15 immunostaining is found in urothelium. Staining is often stronger in the basal half than in the superficial half



Esophagus, squamous epithelium -A strong KRT15 immunostaining is always found in all cell layers of all non-keratinizing and keratinizing squamous epithelium



Placenta, amnion and chorion - In the placenta, a variable KRT15 staining is seen in amnion cells



Thymus - In the thymus, KRT15 is strongly expressed in Hassalls corpuscles and medullary thymic epithelial cells but weaker in cortical thymic epithelial cells



Prostate - In the prostate, KRT15 immunostaining is usually strong in all basal cells but can occasionally also occur in luminal epithelial cells



Tonsil - In tonsil krypts, a strong KRT15 immunostaining is found in all cell layers of squamous epithelium



Sinus paranasales - In the respiratory epithelium, a strong KRT15 immunostaining is seen in basal cells



Tyroid gland