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Anti-Desmoglein 3 Antibody MSVA-543M / Mouse monoclonal

Human SwissProt	P32926
Human Gene Symbol	DSG3
Synonyms	130kDa pemphigus vulgaris antigen (PVA); Balding (Bal); Cadherin family member 6 (CDHF6); Desmoglein-3 (DSG3)
Specificity	Desmoglein 3
Immunogen	Recombinant fragment of human DSG3 protein
lsotype	Mouse / IgG
Species Reactivity	Human
Localization	Cell Surface

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	Tonsil: A moderate to strong desmoglein 1 immunostaining should be seen in a fractio n of squamous epithelial cells.
Negative Control	Tonsil: Desmoglein 1 immunostaining should be absent in all non-squamous epithelial cell types.



Squamous cell carcinoma of the penis with intense membranous Dsg3 immunostaining of tumor cells.



Tonsil - In the tonsil, a moderate to strong Dsg3 immunostaining occurs in squamous epithelial cells of crypts. All other cell types are Dsg3 negative.



Esophagus, squamous epithelium - In the esophagus, a strong membranous Dsg3 immunostaining predominantly occurs in the lower 2_3 of the squamous epithelium.

Biology

Desmoglein-3 (Dsg3) is a 130 kDa calcium-binding transmembrane glycoprotein which is coded by the DSG3 gene at chromosome 18q12.1. Dsg3 is an adhesion protein in desmosomes. In addition to its significant role in cell-cell adhesion, Dsg3 acts as a regulator of pathways governing proliferation, differentiation, and migration of keratinocytes. Because of its suppression of the function of p53, Dsg3 is considered a keratinocyte anti-stress protein. Dsg3 is down-regulated in pemphigus vulgaris where Dsg3 serves as a major antigen for autoantibodies, causing disruption of cell-cell cohesion and pemphigus acantholysis in Dsg3expressing tissues. Dsg3 has also been suggested to play a role in the progression and metastasis of cancer where it is was found upregulated. Dsg3 immunostaining occurs in keratinizing and non-keratinizing squamous epithelia where a predominantly membranous staining pattern can be observed. The extent of staining is variable but it always predominates in the lower cell layers. Squamous cell staining also includes hair follicles, corpuscles of Hassal's and other thymic epithelial cells (weak) as well as some cell layers of tonsil crypts. A weak membranous immunostaining is also seen in amnion cells of the placenta and in cells at the crypt base of the small intestine. In some samples, a weak or even moderate Dsg3 immunostaining is also seen in basal or suprabasal urothelial cells and in some (predominantly basal) cells of respiratory epithelium. In tumors, Dsg1 immunostaining is usually seen in squamous cell carcinomas irrespective of their site of origin and in tumor areas exhibiting squamous differentiation. Dsg3 immunostaining, can also be observed in other tumor entities such as urothelial cancer, gastric cancer, pancreatic adenocarcinoma,

endometroid carcinoma. It for example occurs in areas of squamous differentiation. $% \label{eq:constraint}$

Potential Research Applications

-The diagnostic utility of desmoglein 3 IHC should be investigated in a large cohort of tumors from different entities.

-Desmoglein 3 has been suggested as a prognostic parameter in several different cancer types. This subject deserves further investigation.

Protocol Suggestions

Dilution: 1:100 ; pH7,8 is optimal.

Freshly cut sections should be used (less than 10 days between cutting and staining).

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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Appendix, mucosa



Breats



Bronchus, mucosa - A weak membranous Dsg3 immunostaining is seen in basal cells of respiratory epithelium



Placenta (amnion and chorion) - A weak membranous, predominantly apical Dsg3 immunostaining is seen in



Thymus - Dsg3 immunostaining occurs in corpuscles of Hassall's and (weaker) also in other thymic epithelial cells



Uterus, ectocervix - Significant membranous Dsg3 immunostaining of all cell layers



Duodenum, mucosa - A weak membranous, predominantly apical Dsg3 immunostaining is seen in the crypt base of epithelium of the small intestine



Prostate



Tonsil, surface epithelium -Membranous Dsg3 immunostaining is strongest in basal and suprabasal epithelial cells



Uterus, endometrium (proliferation)



Ileum, mucosa - A weak membranous, predominantly apical Dsg3 immunostaining is seen in the crypt base of epithelium of the small intestine



Skin - Moderate intensity Dsg3 immunostaining of basal and suprabasal epithelial cells



Urinary bladder, urothelium - A membranous Dsg3 immunostaining is focally seen in basal and suprabasal urothelial cells in a sample showing inflammation (intraurothelial granulocytes)



Kidney, medulla

Skin (hairfollicel and sebaceous glands) - Moderate to strong Dsg3 immunostaining of squamous epithelial epithelial cells of hair follicles



Urinary bladder, urothelium - Dsg3 immunostaining is usually absent in the urothelium

