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Anti-Mammaglobin Antibody MSVA-457R / Recombinant Rabbit monoclonal

Human SwissProt	Q13296
Human Gene Symbol	SCGB2A2
Synonyms	Hematopoietic Progenitor Cell Antigen, HPCA1, Mucosialin
Specificity	Mammaglobin
Immunogen	Recombinant human Mammaglobin (SCGB2A2) protein
lsotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasm

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	Cervix uteri: a moderate to strong cytoplasmic staining of the endocervical glands should be seen while the squamous epithelium of the ektocervix remains negative.
Negative Control	Colon: All cells should not show any staining.



Strong mammaglobin immunostaining in most luminal cells of the breast

Variable intensity mammaglobin immunostaining in the cells of a breast carcinoma of no special type (NST)

iong manimagiobin positivity in endocervical giands

Biology

Human Mammaglobin-A (SCGB2A2) was described as one of more than 20 members of the uteroglobin/Clara cell protein family of small epithelial secretory proteins, termed secretoglobins. It is a 93-amino acid protein that occurs in the mammary tissue in two main forms with approximate molecular masses of 18 and 25 kDa. Although the secretoglobins are known to be regulated by steroid hormones, mammaglobin expression in the mammary gland is independent of steroid hormones. The function of mammaglobin protein is not known. Other related secretoglobins seem to be involved in cell signaling, immune response, and chemotaxis, and may also serve as transporters for steroid hormones in humans. Mammaglobin is upregulated in neoplastic breast epithelia as compared to normal cells but its overexpression does not influence tumor cell growth. The protein's capability to bind steroid-like molecules suggests the existence of a hormonal transport or activation function. The mammaglobin protein is detectable in only a few normal tissue types including luminal cells of the breast (not always in all cells; + to +++), endocervical glands (mostly +++, but not all glands in all patients), endometrium (not always in all cells; + to +++), scattered epithelial cells in the fallopian tube (++), principal cells of the epididymis (+ to ++), and few scattered cells in salivary glands (+ - ++). Mammaglobin staining is found most intense in endocervical and endometrial glands. In these tissues, the stroma cells are sometimes also positive (perhaps representing a diffusion artifact). Mammaglobin occurs in about 80% of breast carcinomas. Among non-breast carcinomas, convincing mammaglobin expression is seen in endometrioid carcinomas (~40% cases) and sweat and salivary gland tumors. Other tumor entities can also express mammaglobin at lower frequency.

Potential Research Applications

-A comprehensive study analyzing mammaglobin-A in various different tumor entities would be helpful to better assess the diagnostic significance of mammaglobin IHC.

-The clinical significance of mammaglobin-A expression levels in breast cancer and other tumor types is not clear yet.

-The diagnostic accuracy of mammaglobin-A IHC in combination with other antibodies such as GATA3 and gcdfp-15 awaits further evaluation. -The functional role of mammaglobin in normal and neoplastic cells 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.

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



Bone marrow



Cerebellum, grey (Stratum neuronorum)



Endocervix - Strong mammaglobin positivity in endocervical glands



Endometrium in pregnancy, decidua -Mammaglobin immunostaining is variable in endometrial glands. Here a moderate staining is seen in only a few scattered cells



Fallopian tube, mucosa - A weak mammaglobin positivity is seen in few scattered epithelial cells in the fallopian tube



Endometrium, proliferation -Mammaglobin immunostaining is variable in endometrial glands and can be negative



lleum, mucosa



Endometrium, secretion -Mammaglobin immunostaining is variable in endometrial glands. Here a predominantly apical staining is seen



Kidney, pelvis, urothelium



Epididymis



Liver



Uterus, myometrium



Pancreas



Prostate

