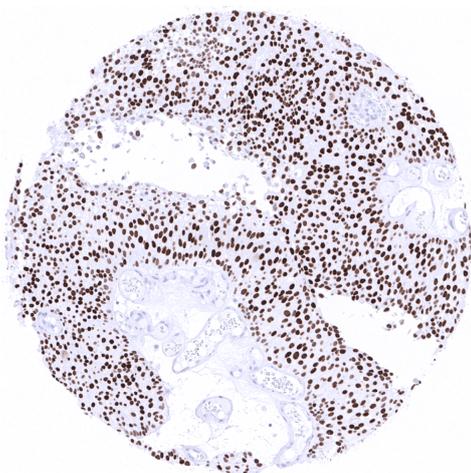


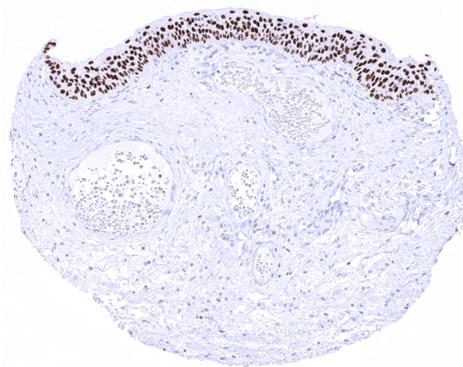
Anti-Gata 3 Antibody MSVA-450M / Mouse monoclonal

Human SwissProt	P23771
Human Gene Symbol	GATA3
Synonyms	GATA3; GATA binding protein-3; GATA-binding factor 3; GATA3; HDR; HDRS; Transacting T-cell-specific transcription factor GATA-3
Specificity	GATA3
Immunogen	Recombinant human Gata3 protein
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Nuclear
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.

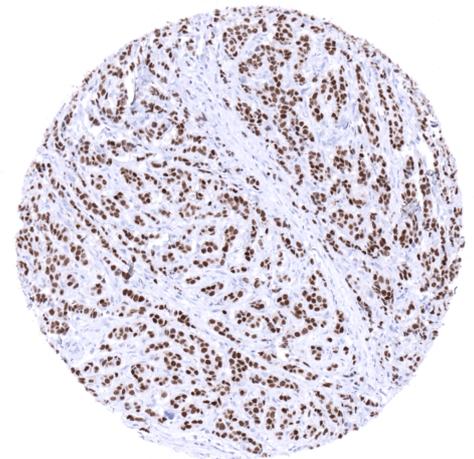
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Kidney: A moderate to strong nuclear staining reaction should be seen in virtually all epithelial collecting duct cells and podocytes in glomeruli. Tonsil: The vast majority of T helper cells (Th2) in the T-zones should show a weak to moderate nuclear staining.
Negative Control	Kidney: Staining should be absent in proximal and distal tubuli as well as in blood vessels. Tonsil: Staining should be absent in B-cells.



Urinary bladder: Non-invasive papillary urothelial carcinoma (pTa, low grade) with strong GATA3 positivity of all tumor cells.



Urinary bladder: Strong nuclear GATA3 immunostaining in normal urothelium.



Breast: Strong GATA3 immunostaining in a lobular breast cancer.

Biology

The GATA3 gene at 10p14 consists of 8 exons and codes for the GATA3 transcription factor which is critical for the embryonic development of various tissues including the parathyroid gland and the kidney. It plays a role in the luminal differentiation of breast epithelium, the development of collecting system of the kidney and the urothelium, and in trophoblastic differentiation. In lymphoid cells, GATA3 regulates the expression of a wide range of biologically and clinically important genes. GATA3 is required for the formation of T helper (Th) cells, especially Th2 cells which are critical for the development of allergic and humoral immune responses. In normal tissues, nuclear GATA3 immunostaining is seen in urothelium (+++), squamous epithelium of the skin (+++) including hair follicles (+++) and sebaceous glands (+++), parathyroid gland (+++), trophoblastic cells (+ - +++; more intense in first trimester than in mature placenta), chorion cells (+++), and amnion cells (+) of the placenta, collecting ducts (+++; not all) and glomerular podocytes (++) of the kidney, seminal vesicle epithelium (+++), tall columnar cells and basal cells (++) of the epididymis, a fraction of the luminal cells of breast glands (+++), and a fraction of lymphocytes, most prominently in the thymus (++) . GATA3 also plays a role in cancer biology. It is one of the most commonly mutated genes in breast cancer where it plays a role in estrogen and androgen receptor signaling. Among tumors, GATA3 expression is primarily seen in urothelial and breast cancers but it can also occur in other tumor types.

Potential Research Applications

-Because of partly controversial data, the diagnostic utility of GATA3 IHC should be investigated in a large cohort of tumors from different entities.

-The prognostic role of GATA3 expression in tumor types that are positive in only a fraction of cases is unclear.

-GATA3 is one of the three genes mutated in >10% of breast cancers (Cancer Genome Atlas) and plays a role in estrogen and androgen receptor signaling. Further studies are needed to elucidate the role, if any, of GATA3 in the development of breast cancer.

-GATA3 delineates important subgroups of inflammatory cells of which the exact biological and clinical role is not fully understood. GATA3 is thus an important component of antibody panels for use in multicolor immunofluorescence analyses.

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).

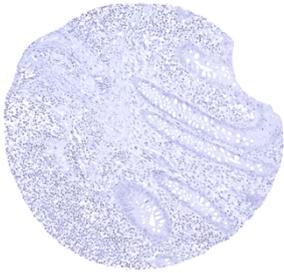
Limitations

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

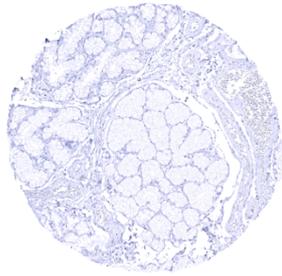
Not for resale without express authorization.

Warranty

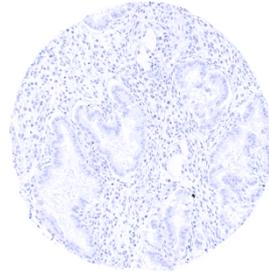
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



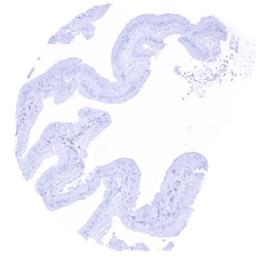
Appendix, mucosa



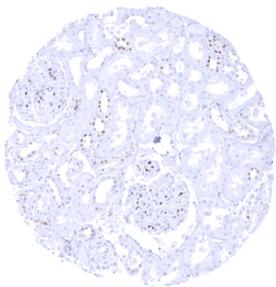
Duodenum, Brunner gland



Endometrium, secretion



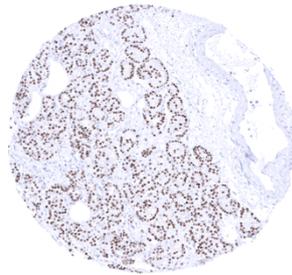
Gallbladder, epithelium



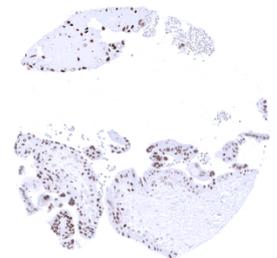
Kidney, cortex - In the kidney, a moderate to strong GATA3 positivity occurs in podocytes and in collecting ducts



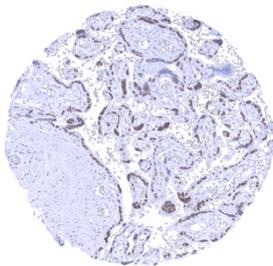
Lung



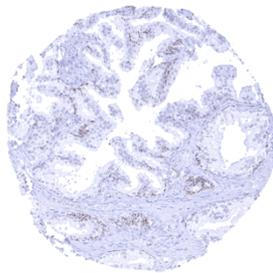
Parathyroid - Parathyroid glands show a strong GATA3 positivity



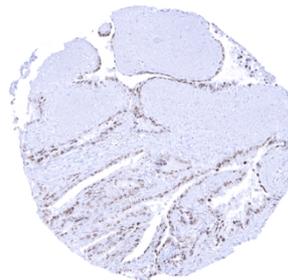
Placenta, early - In the placenta, a strong GATA3 positivity is seen in trophoblastic cells. Staining is strongest in the first trimester



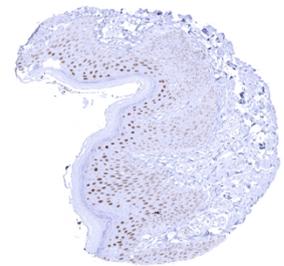
Placenta, mature - In the placenta, GATA3 positivity is seen in trophoblastic cells. Staining intensity decreases during maturation



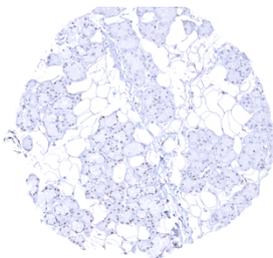
Prostate - Kidney, medulla (In the prostate, a weak to moderate GATA3 staining occurs in basal cells)



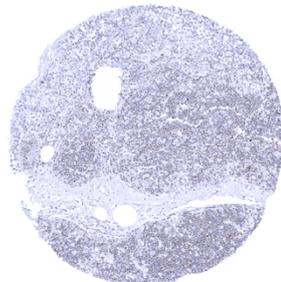
Seminal vesicle - Seminal vesicle epithelium exhibits a moderate to strong GATA3 positivity



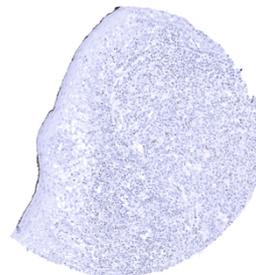
Skin - A moderate to strong GATA3 immunostaining is seen in the squamous epithelium of the skin. Strongest intensity occurs in the upper layers



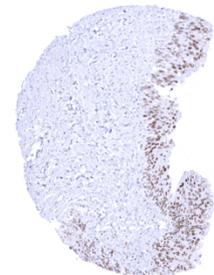
Submandibular gland - A weak GATA3 positivity occurs in glandular cells of salivary glands



Thymus - GATA3 immunostaining is seen in a fraction of lymphocytes, especially in the thymus



Tonsil, surface epithelium



Urinary bladder, urothelium - A strong GATA3 positivity occurs in the urothelium