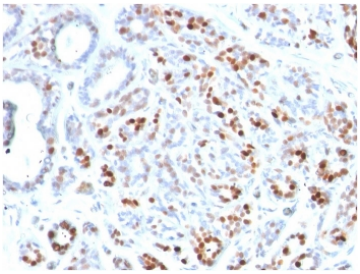
GATA3 Antibody / Breast Lineage Marker Antibody [clone GATA3/2444] (V7805)

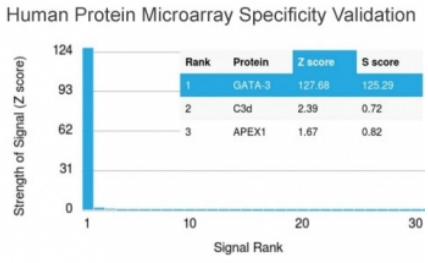
Catalog No.	Formulation	Size
V7805-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7805-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7805SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

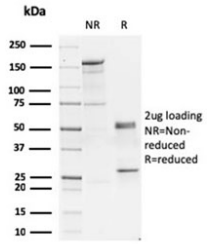
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	GATA3/2444
Purity	Protein G affinity chromatography
UniProt	P23771
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This GATA3 Antibody / Breast Lineage Marker Antibody is available for research use only.



GATA3 Antibody Breast Carcinoma IHC. Immunohistochemistry analysis of FFPE human breast carcinoma tissue stained with clone GATA3/2444 demonstrates strong nuclear HRP-DAB brown staining within malignant epithelial cells, consistent with the established role of GATA binding protein 3 / GATA3 as a breast lineage-associated transcription factor involved in luminal epithelial differentiation.



GATA3 Antibody Microarray Specificity Validation. Analysis of a HuProt(TM) human protein microarray containing more than 19,000 full-length human proteins using clone GATA3/2444 demonstrates highly selective binding to GATA binding protein 3 / GATA3 with minimal off-target reactivity detected across the tested human proteome. The strong enrichment of GATA3 signal relative to lower-ranking proteins supports the specificity of this monoclonal antibody for studies involving epithelial differentiation, breast lineage-associated transcriptional regulation, and T-cell lineage biology.
Z- and S-score interpretation: The Z-score represents the signal intensity generated when an antibody, together with a fluorescently labeled secondary antibody, binds to a specific protein target on the HuProt(TM) array. Z-scores are expressed as standard deviations above the mean signal intensity of all proteins present on the array. Proteins are ranked according to descending Z-score values, and the S-score represents the difference in Z-score between sequentially ranked proteins. The S-score therefore reflects the relative specificity of an antibody for its intended target compared to other proteins represented on the array.



SDS-PAGE analysis of purified, BSA-free GATA3 antibody as confirmation of integrity and purity.

Description

GATA binding protein 3 (GATA3) is a zinc finger transcription factor involved in epithelial differentiation, luminal cell identity, and T-cell lineage specification. The GATA3 Antibody / Breast Lineage Marker Antibody clone GATA3/2444 is designed for highly specific detection of GATA3 expression in epithelial and tumor-associated tissue environments where transcription factor specificity is particularly important.

GATA3 belongs to the GATA family of transcriptional regulators, which bind the consensus DNA motif 'GATA' through conserved zinc finger domains. The protein is encoded by the GATA3 gene on chromosome 10p14 and functions as a master transcriptional regulator controlling developmental lineage specification across multiple tissue systems. In the immune system, GATA3 is essential for T-helper 2 cell differentiation and cytokine-associated transcriptional programs. In epithelial biology, GATA3 contributes to mammary gland morphogenesis, luminal differentiation, and maintenance of epithelial identity.

GATA3 expression is particularly well established in breast epithelium, urothelial tissue, parathyroid tissue, and subsets of trophoblastic and salivary gland-associated cellular populations. In diagnostic pathology, GATA3 immunohistochemistry is frequently used to support classification of breast carcinoma and urothelial carcinoma due to the relatively characteristic nuclear staining profile observed in many tumors of these lineages. The transcription factor is also associated with luminal differentiation programs and epithelial maturation states in hormone-responsive tissues.

The clone GATA3/2444 monoclonal antibody is further differentiated by protein microarray specificity validation performed against a HuProt(TM) array containing more than 19,000 full-length human proteins. This large-scale specificity screening approach helps evaluate potential cross-reactivity against a broad spectrum of structurally related and unrelated proteins simultaneously. Such validation is particularly valuable for transcription factor targets, where conserved DNA-binding domains can increase the risk of off-target recognition by poorly characterized antibodies. The resulting specificity profile supports use of this GATA3 antibody in studies where clean nuclear localization and selective target recognition are important experimental considerations.

GATA3 has also emerged as an important biologic marker beyond diagnostic pathology. In breast cancer biology, GATA3 expression is associated with luminal differentiation states and hormone receptor-associated transcriptional programs. Loss or dysregulation of GATA3 activity has been linked to altered epithelial plasticity, tumor progression, and changes in differentiation status. In immune biology, GATA3 regulates cytokine-associated signaling networks involved in T-cell maturation and adaptive immune responses. These diverse biologic functions continue to drive broad interest in GATA3 across cancer biology, immunology, developmental biology, and epithelial differentiation research fields.

Immunohistochemical analysis using GATA3 antibodies commonly demonstrates nuclear staining patterns consistent with the role of GATA3 as a transcriptional regulator. Strong nuclear staining is frequently observed in breast epithelial and urothelial-associated tumor populations, while lymphoid tissues may demonstrate staining within subsets of T-cell lineage populations.

Researchers studying epithelial differentiation and tumor lineage markers may also be interested in additional products featured within our Cancer Antibodies collection.

Application Notes

Optimal dilution of the GATA3 Antibody / Breast Lineage Marker Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 357-436) was used as the immunogen for the GATA3 antibody.

Storage

Store the GATA3 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

GATA3 antibody, GATA binding protein 3 antibody, Breast lineage marker antibody, Mammary epithelial marker antibody, Transcription factor specificity validated antibody

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