10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Thyroglobulin (Thyroidal Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM517]
Catalog # AH10756

Product Information

Application	FC, IHC-P
Primary Accession	P01266
Other Accession	7038, 654591
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SPM517
Calculated MW	304790

Additional Information

Gene ID	7038
Other Names	Thyroglobulin, Tg, TG
Application Note	FC~~1:10~50 IHC-P~~N/A
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Thyroglobulin (Thyroidal Cell Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TG (HGNC:11764)
Function	Acts as a substrate for the production of iodinated thyroid hormones thyroxine (T4) and triiodothyronine (T3) (PubMed:17532758, PubMed:32025030). The synthesis of T3 and T4 involves iodination of selected tyrosine residues of TG/thyroglobulin followed by their oxidative coupling in the thyroid follicle lumen (PubMed:32025030). Following TG re-internalization and lysosomal-mediated proteolysis, T3 and T4 are released from the polypeptide backbone leading to their secretion into the bloodstream (PubMed:32025030). One dimer produces 7 thyroid hormone molecules (PubMed:32025030).

Cellular Location	Secreted. Note=Secreted into the thyroid follicle lumen (PubMed:19509106). Localizes to colloid globules, a structure formed in the thyroid follicle lumen consisting of cross-linked TG arranged in concentric layers (PubMed:11082042, PubMed:8626858).
Tissue Location	Specifically expressed in the thyroid gland.

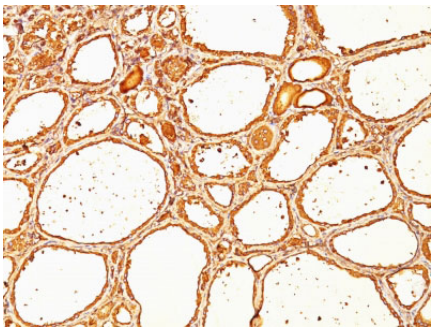
Background

Thyroglobulin is a 660kDa dimeric pre-protein with mutiple glycosylation sites. It is produced by and processed within the thyroid gland to produce the hormone thyroxine and triiodothyronine. Prior to forming dimers, thyroglobulin monomers undergo conformational maturation in the endoplasmic reticulation. The vast majority of follicular carcinomas of the thyroid will give positive immunoreactivity for anti-thyroglobulin even though sometimes only focally. Poorly differentiated carcinomas of the thyroid are frequently anti-thyroglobulin negative. Adenocarcinomas of other-than-thyroid origin do not react with this antibody. This antibody is useful in identification of thyroid carcinoma of the papillary and follicular types. Presence of thyroglobulin in metastatic lesions establishes the thyroid origin of tumor. Anti-thyroglobulin, combined with anti-calcitonin, can identify medullary carcinomas of the thyroid. Furthermore, anti-thyroglobulin, combined with anti-TTF1, can be a reliable marker to differentiate between primary thyroid and lung neoplasms.

References

Ossendorp FA, et. al. Journal of Immunological Methods, 1989, 120(2):191-200. | Bellet, D, et al. J Clin Endocrin Metab 1983;56:530-533 | Heffess CS et al. Cancer. 2002;95(9):1869-78 | Judkins AR et al. Hum Pathol. 1999;30(11):1373-

Images



Formalin-fixed, paraffin-embedded human Thyroid Carcinoma stained with Thyroglobulin Monoclonal Antibody (SPM517).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.