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

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody

Thyroglobulin Antibody
Catalog # ASR4154

Specification

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Rat, Human, Mouse, Dog**
Clonality	**Monoclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**Anti-Thyroglobulin antibody has been tested by western blot and is suitable for the detection of thyroglobulin in ELISA, immunohistochemistry, and immunoprecipitation. For immunohistochemistry, both frozen sections and formalin fixed, paraffin-embedded tissue sections can be used without epitope retrieval or enzyme digestion. This antibody is specific for the 330 kDa thyroglobulin protein. Thyroglobulin shows a cytoplasmic localization. Thyroid tissue can be used as a positive control.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2**
Immunogen	**This protein A purified monoclonal antibody was produced by repeated immunizations with human thyroglobulin protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 7038

Other Names
7038

Purity
This protein A purified mouse monoclonal antibody reacts specifically with thyroglobulin in human tissues. The antibody recognizes a 330-kDa band corresponding to thyroglobulin. Cross reactivity with thyroglobulin from mouse, rat and dog will occur. Cross reactivity with thyroglobulin from other sources has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - 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.

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - Images

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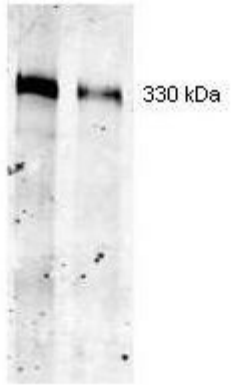

Western blot using ROCKLAND Immunochemical's Mouse Mab-anti-Thyroglobulin antibody. Separation was achieved under reducing conditions using a pre-cast 5% Tris-HCl gel from Bio-Rad Laboratories. This antibody recognizes a single 330 kDa band corresponding to human thyroglobulin (left lane 3 µg, right lane 3 ng) as confirmed by the position of molecular weight markers (not shown). A 1:400 dilution of Mab anti-Thyroglobulin was used for 2h followed by detection using a 1:5,000 dilution of IRDye™800 conjugated Goat-a-Mouse IgG [H&L] (610-132-121) and visualization using the Odyssey® Infrared Imaging System developed by LI-COR. Other detection systems will yield similar results. IRDye is a trademark of LI-COR, Inc.

Anti-Thyroglobulin (MOUSE) Monoclonal Antibody - Background

Thyroglobulin (Tg) is synthesized by the follicular epithelial cells of the thyroid and secreted from the thyroid gland with the stimulation of TSH and/or thyroid stimulating immunoglobulins. Thyroglobulin is a prognostic marker for Graves` disease. Thyroglobulin antibody has been useful in the positive identification of thyroid carcinomas of the papillary and follicular types.