abcam

ab156008

Anti-Thyroglobulin antibody [EPR9730]

Anti-Thyroglobulin antibody [EPR9730] (ab156008) is a rabbit monoclonal antibody detecting Thyroglobulin in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 20 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR9730
Purification technique	Affinity purification Protein A
Concentration	0.695 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse

Dilution info	1/10000 - 1/50000
Notes	-

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Thyroglobulin

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).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Thyroglobulin antibody [EPR9730] (ab156008) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Thyroglobulin?
Anti-Thyroglobulin [EPR9730] (ab156008) specifically detects a band for Thyroglobulin (UniProt: P01266) at a molecular weight of 305kDa.

Trusted by the scientific community
Anti-Thyroglobulin [EPR9730] (ab156008) was first used in a scientific publication in 2013 and has been cited over 20 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR9730] also available for your convenience: ab156008, Alexa Fluor® 488 - ab214872, APC - ab221284, Carrier free - ab229449, Carrier free - ab271919

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Thyroglobulin often abbreviated as Tg is a glycoprotein with a molecular mass of approximately 660 kDa. It is expressed primarily in the thyroid gland particularly within the follicular cells. This protein serves as a precursor for thyroid hormones such as thyroxine (T4) and triiodothyronine (T3). High thyroglobulin levels in the

	bloodstream can indicate altered thyroid function and clinicians frequently measure these levels for diagnostic purposes. Researchers have developed specific anti-thyroglobulin antibodies to facilitate the study and measurement of this protein in various contexts.
Biological function summary	Thyroglobulin plays a critical role in the synthesis and storage of thyroid hormones. It acts as a scaffold for iodination and hormone synthesis within the colloid of thyroid follicles. Thyroglobulin is not part of a protein complex; rather it undergoes iodination to form hormone precursors that later convert into active hormones. Anti-thyroglobulin antibodies can be used in research or diagnostic labs to detect the presence or concentration of thyroglobulin in serum samples. These antibodies help in understanding the nuances of thyroid hormone biosynthesis and in monitoring thyroid activity.
Pathways	Thyroglobulin is deeply involved in the thyroid hormone synthesis pathway a fundamental part of the endocrine system's operations. This process connects closely with the iodine metabolism pathway as iodine plays an essential role in hormone production. Thyroglobulin interacts indirectly with proteins like thyroid peroxidase which catalyzes iodination of thyroglobulin. The synthesis and release of thyroid hormones proceed through a carefully orchestrated sequence affecting many physiological processes including metabolism growth and development.
Associated diseases and disorders	Thyroglobulin has associations with conditions such as thyroid cancer and autoimmune thyroid diseases. For instance elevated serum thyroglobulin can serve as a tumor marker in differentiated thyroid cancer. Anti-thyroglobulin antibodies are often present in autoimmune thyroid diseases like Hashimoto's thyroiditis where the body's immune system mistakenly targets thyroid proteins. Thyroid peroxidase antibodies are also common in these disorders indicating a shared autoimmune response against thyroid-specific antigens. Understanding these relationships aids in the diagnosis and management of thyroid-related conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

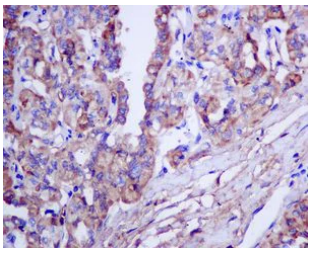
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

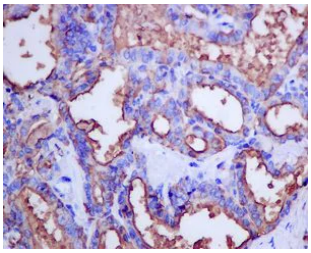
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Thyroglobulin antibody

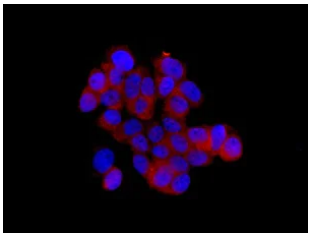
Immunohistochemical analysis of paraffin embedded Human thyroid gland papillary carcinoma tissue labeling Thyroglobulin with unpurified ab156008 antibody at 1/250.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Thyroglobulin antibody

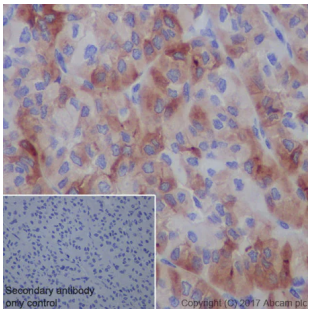
Immunohistochemical analysis of paraffin embedded Human thyroid gland follicular carcinoma tissue labeling Thyroglobulin with unpurified ab156008 antibody at 1/250.



Immunocytochemistry/ Immunofluorescence - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Thyroglobulin antibody

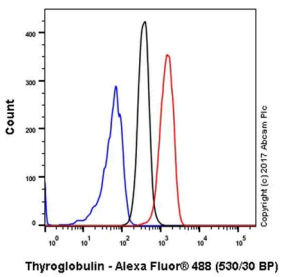
Immunofluorescent analysis of TT cells labeling Thyroglobulin with unpurified ab156008 at 1/50.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Thyroglobulin antibody

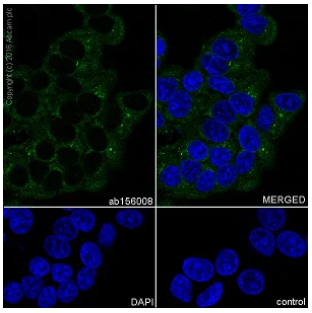
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human thyroid carcinoma tissue sections labeling Thyroglobulin with Purified ab156008 at 1:500 dilution (1.36 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Flow Cytometry (Intracellular) - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Flow Cytometry (Intracellular) staining using rabbit Anti-Thyroglobulin antibody

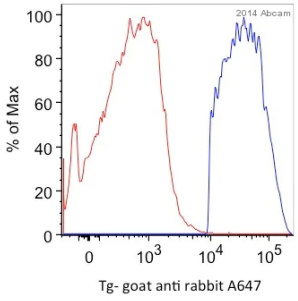
Intracellular Flow Cytometry analysis of TT (Human thyroid carcinoma epithelial cell) cells labeling Thyroglobulin with purified ab156008 at 1/70 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Thyroglobulin antibody

Immunocytochemistry/ Immunofluorescence analysis of TT (Human thyroid carcinoma epithelial cell) cells labeling Thyroglobulin with Purified ab156008 at 1:100 dilution. Cells were fixed in 100% Methanol. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

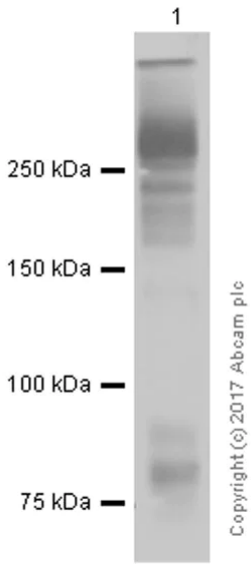


This image is courtesy of a customer review submitted by Sanjay Gawade.

Flow Cytometry (Intracellular) - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Thyroglobulin Flow Cytometry (Intracellular) staining using rabbit Anti-Thyroglobulin antibody

Unpurified ab156008 staining Thyroglobulin in mouse thyroid cells by intracellular flow cytometry. Cells were fixed with formaldehyde and permeabilized with permeabilization buffer. The sample was incubated with the primary antibody (1/100 in FACS buffer) for 30 minutes at 24°C. An Alexa Fluor® 647-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Gating Strategy: Epithlial cells. Red line shows unlabeled sample, blue line shows labeled sample.



Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

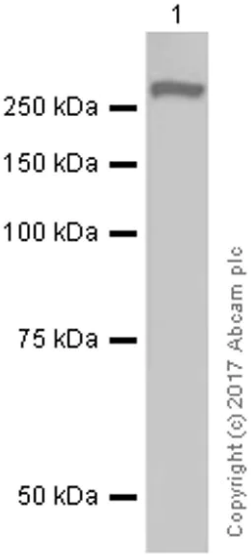
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008) at 1/10000 dilution

All lanes:
Human thyroid lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 305 kDa



Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

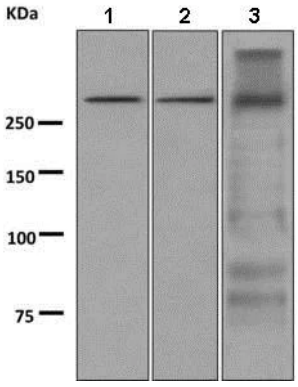
Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008) at 1/50000 dilution

All lanes:
Rat thyroid lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 305 kDa



Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

All lanes:
Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008) at 1/10000 dilution

Lane 1:
Mouse thyroid lysate at 10 µg

Lane 2:
Rat thyroid lysate at 10 µg

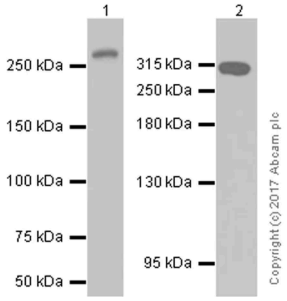
Lane 3:
Human thyroid lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 305 kDa

Observed band size: 294-300 kDa



Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Thyroglobulin antibody [EPR9730] (ab156008) at 1/50000 dilution

Lane 1:
Mouse thyroid lysates at 15 µg

Lane 2:
ICR thyroid lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 305 kDa

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