

Anti-Thyroxine Binding Globulin/SERPINA7 Antibody Picoband™

Catalog Number: A02766-1

About SERPINA7

Thyroxine-binding globulin (TBG) is a globulin protein that in humans is encoded by the SERPINA7 gene. There are three proteins including thyroxine-binding globulin (TBG), transthyretin and albumin responsible for carrying the thyroid hormones thyroxine (T4) and 3,5,3'-triiodothyronine (T3) in the bloodstream. This gene encodes the major thyroid hormone transport protein, TBG, in serum. It belongs to the serpin family in genomics, but the protein has no inhibitory function like many other members of the serpin family. Mutations in this gene result in TBG deficiency, which has been classified as partial deficiency, complete deficiency, and excess, based on the level of serum TBG. Alternatively spliced transcript variants encoding different isoforms have been found, but the full-length nature of these variants has not been determined.

Overview

Product Name	Anti-Thyroxine Binding Globulin/SERPINA7 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-Thyroxine Binding Globulin/SERPINA7 Antibody Picoband™ catalog # A02766-1. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P05543

Technical Details

Immunogen	E.coli-derived human Thyroxine Binding Globulin/SERPINA7 recombinant protein (Position: R55-R389).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.25-0.5 µg/ml, Human</p> <p>Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human</p> <p>Flow Cytometry, 1-3 µg/1x10⁶ cells, Human</p> <p>Direct ELISA, 0.1-0.5 µg/ml, Human</p>

Anti-Thyroxine Binding Globulin/SERPINA7 Antibody Picoband™ (A02766-1) Images

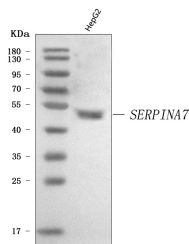


Figure 1. Western blot analysis of Thyroxine Binding Globulin/SERPINA7 using anti-Thyroxine Binding Globulin/SERPINA7 antibody (A02766-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HepG2 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Thyroxine Binding Globulin/SERPINA7 antigen affinity purified polyclonal antibody (Catalog # A02766-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Thyroxine Binding Globulin/SERPINA7 at approximately 50 kDa. The expected band size for Thyroxine Binding Globulin/SERPINA7 is at 46 kDa.

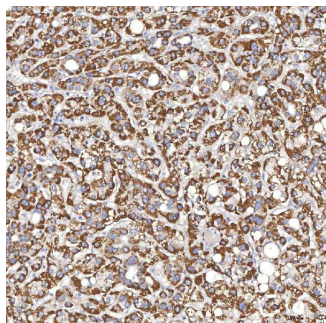


Figure 2. IHC analysis of Thyroxine Binding Globulin/SERPINA7 using anti-Thyroxine Binding Globulin/SERPINA7 antibody (A02766-1).

Thyroxine Binding Globulin/SERPINA7 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thyroxine Binding Globulin/SERPINA7 Antibody (A02766-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

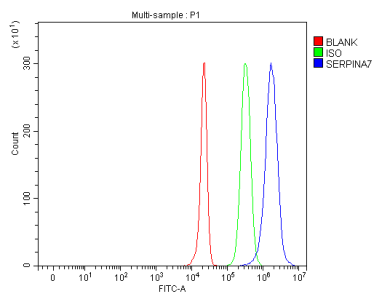


Figure 3. Flow Cytometry analysis of HepG2 cells using anti-Thyroxine Binding Globulin/SERPINA7 antibody (A02766-1).

Overlay histogram showing HepG2 cells stained with A02766-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Thyroxine Binding Globulin/SERPINA7 Antibody (A02766-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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