

Thyroglobulin (C-20): sc-7835

BACKGROUND

Thyroglobulin is a large preprotein containing multiple glycosylation sites. Located in the thyroid gland, Thyroglobulin is the precursor of the iodinated thyroid hormones thyroxine and triiodothyronine. Thyroglobulin monomers undergo conformational maturation in the endoplasmic reticulum, prior to forming dimers. This dimerization, as well as export of Thyroglobulin to the Golgi complex, has been shown to require Ca^{2+} . Defects in Thyroglobulin are known to cause some types of goiter (an enlargement of the thyroid gland). This condition is thought to result from defective dimerization and transport of Thyroglobulin to the Golgi complex.

REFERENCES

1. Malthiery, Y. and Lissitzky, S. 1987. Primary structure of human thyroglobulin deduced from the sequence of its 8448-base complementary DNA. *Eur. J. Biochem.* 165: 491-498.
2. Mallet, B., et al. 1995. N-glycans modulate *in vivo* and *in vitro* thyroid hormone synthesis. Study at the N terminal domain of thyroglobulin. *J. Biol. Chem.* 270: 29881-29888.
3. Prabakaran, D., et al. 1996. Oligomeric assembly of thrombospondin in the endoplasmic reticulum of thyroid epithelial cells. *Eur. J. Cell Biol.* 70: 134-141.

CHROMOSOMAL LOCATION

Genetic locus: TG (human) mapping to 8q24.22.

SOURCE

Thyroglobulin (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Thyroglobulin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7835 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Thyroglobulin (C-20) is recommended for detection of Thyroglobulin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Thyroglobulin siRNA (h): sc-63346, Thyroglobulin shRNA Plasmid (h): sc-63346-SH and Thyroglobulin shRNA (h) Lentiviral Particles: sc-63346-V.

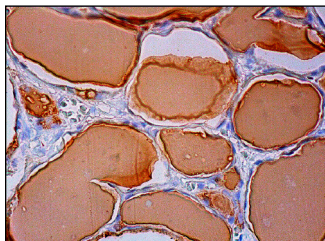
Molecular Weight of Thyroglobulin: 305/298 kDa.

Positive Controls: human thyroid extract: sc-363782.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Thyroglobulin (C-20): sc-7835. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid tissue showing extracellular staining of colloid.

SELECT PRODUCT CITATIONS

1. Ogisawa, K., et al. 2002. Establishment and characterization of OCUT-1, an undifferentiated thyroid cancer cell line expressing high level of telomerase. *J. Surg. Oncol.* 80: 197-203.
2. Thomas, T., et al. 2006. Expression of endoderm stem cell markers: evidence for the presence of adult stem cells in human thyroid glands. *Thyroid* 16: 537-544.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Thyroglobulin (D-9): sc-365997** or **Thyroglobulin (1D4): sc-53543**, our highly recommended monoclonal alternatives to Thyroglobulin (C-20).