Datasheet for ABIN934717

Thyroperoxidase Protein

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Overview

Quantity:	100 µg
Target:	Thyroperoxidase (TPO)
Origin:	Human
Source:	Human
Protein Type:	Native

Product Details

Characteristics:	Purified native Human Thyroid Peroxidase protein Protein Source: Human thyroid glands
Purity:	> 95 % pure

Target Details

Target:	Thyroperoxidase (TPO)
Alternative Name:	Thyroid Peroxidase (TPO Products)
Background:	Thyroid peroxidase or thyroperoxidase (TPO) is an enzyme expressed mainly in the thyroid that liberates iodine for addition onto tyrosine residues on thyroglobulin for the production of thyroxine (T4) or triiodothyronine (T3), thyroid hormones. In humans, thyroperoxidase is encoded by the TPO gene. Description: Human thyroid glands. Alternative Names: TPO protein, MSA protein, TPX protein
Pathways:	Thyroid Hormone Synthesis

Application Details

Application Notes:	Each Investigator should determine their own optimal working dilution for specific applications.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstitute in distilled water.
Buffer:	Lyophilized in 20 mM TRIS, with 50 mM KCl, no preservatives.
Preservative:	Without preservative
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Aliquot and store at -20 °C.

Publications

Product cited in:	Neethling, Ramakrishna, Keler, Buchli, Woodburn, Weidanz: "Assessing vaccine potency using TCRmimic antibodies." in: **Vaccine**, Vol. 26, Issue 25, pp. 3092-102, (2008) (PubMed).

Validation report #102793 for SDS-PAGE (SDS)

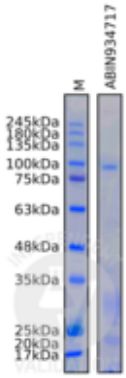
Successfully validated (SDS-PAGE (SDS))

by in.vent Diagnostica GmbH, Hennigsdorf, Germany

Report Number: 102793

Date: Apr 17 2018

Target:	TPO
Lot Number:	A17091521
Method validated:	SDS-PAGE (SDS)
Positive Control:	Molecular weight (Uniprot P07202: 8 possible isoforms of TPO with a molecular weight between 103 and 67 kDa)
Negative Control:	none
Notes:	Passed. Native human TPO protein ABIN934717 appears as a band with a molecular weight of approximately 100kDa after separation on an SDS-PAGE gel.
Primary Antibody:	ABIN934717
Protocol:	• Dilute 2µg of native human TPO (antibodies-online, ABIN934717, lot A17091521) in 2x sample buffer (126mM Tris-HCl pH6.8, 20% glycerol, 4% SDS, 0.02% bromophenol blue, 0.1M DTT). • Boil samples for 5min at 95°C. • Separate the sample on a denaturing SERVAGel TG PRiME 12% precast gel (Serva, 43266, V170144) in a Electrophoresis chamber (Hoefer Inc., SE250) with Laemmli buffer for 1h at 250V, 50mA/gel along side 4µl Roti-Mark Tricolor (Carl Roth, 8271, lot 326248051) molecular weight marker. • Staining of the separated proteins with InstantBlue Protein Stain (Expedeon, ISB1L, lot 170616330) according to the manufacturer's recommendations. • Image acquisition: 600dpi scan and increasing of color saturation.
Experimental Notes:	The manufacturer's information concerning the protein's purity and molecular weight can be confirmed.



Validation image no. 1 for Thyroid Peroxidase (TPO) protein (ABIN934717)

Coomassie staining subsequently to SDS-PAGE separation of human TPO1 ABIN934717.

Validation report #103248 for Lipid Interaction Assay (LIA)

Successfully validated (Lipid Interaction Assay (LIA))

by in.vent Diagnostica GmbH, Hennigsdorf, Germany

Report Number: 103248

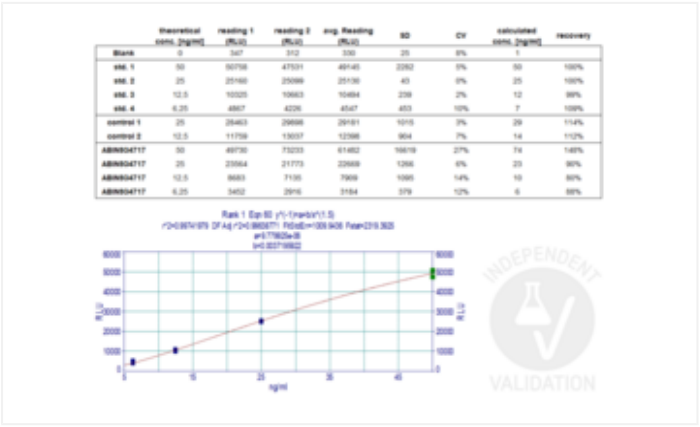
Date: Apr 17 2018

Target:	TPO
Lot Number:	A17091521
Method validated:	Lipid Interaction Assay (LIA)
Positive Control:	Protein concentration (manufacturer's specification) Standards and controls for LIA based of purified TPO out of human thyroid
Negative Control:	Dilution Buffer for LIA Deionized water for absorbance at 280nm
Notes:	Passed. Protein concentration of native human TPO protein ABIN934717 can be confirmed by absorbance at 280nm and by LIA.
Primary Antibody:	ABIN934717
Protocol:	• Measuring protein concentration using absorbance at 280nm: ◦ 100µl sample in a 96-Well UV Microplate (Thermo Fisher Scientific, 8404) ◦ Measuring at 280nm ◦ Calculation with d of 0.28cm ◦ Extinction coefficient assuming all pairs of Cys residues form cysteines: Abs 0.1% (=1g/l)= 1.304 • Measuring TPO concentration using an in-house coated tube LIA: ◦ Sample dilution with assay dilution buffer in 6 steps (10000ng/ml and 100ng/ml as pre-dilution; 50, 25, 12.5, 6.25ng/ml as samples) ◦ Pipette 300µl tracer and 200µl standards, controls, or samples per tube in duplicates. ◦ Incubation ON at RT. ◦ Add 1ml washing solution to each coated tube prior to decanting off the liquid. ◦ Add 1 ml washing solution to each coated tube three times and decant off the liquid. Turn the tubes upside down for 5–10min and adsorb remaining liquid with blotting paper. ◦ Measurement in a luminometer by automatic injection of LIA reagents (sodium hydrate, azotic acid). Measurement time: 1sec. • Calculate the concentration based on the standard curve.
Experimental Notes:	• The LIA measures human TPO in serum, plasma and other fluids, using one anti-TPO antibody at solid phase and another anti-TPO antibody as tracer. The measurement range is

from 10 to 50ng/ml.

- Absorbance at 280nm was 0.22. The calculated concentration considering the extinction coefficient is 0.6mg/ml (expected was 0.5mg/ml).
- Regression of TPO LIA standard curve was R^2=0.997. Calculated concentration of LIA controls was 28ng/ml (expected 20-30ng/ml) and 14ng/ml (expected 10-15ng/ml).
- The calculated concentration of the diluted samples was 24ng/ml (expected 25ng/ml) and 13ng/ml (expected 12.5ng/ml). The other dilutions were out of measurement range.

Image for Validation report #103248



Validation image no. 1 for Thyroid Peroxidase (TPO) protein (ABIN934717)

Standard curve and ABIN934717 measurements using LIA.