



## Thyroid Receptor Antibodies

<b>Synonyms</b>	TRAb, TSH receptor antibodies, TSH-RAb
<b>Clinical Indication</b>	<p>Thyroid disorders, Graves' disease, risk of neonatal hypothyroidism</p> <p>Features of hyperthyroidism are many and may include: breathlessness, goitre, hyperactivity, insomnia, irritability, anxiety, palpitations, muscle weakness, heat intolerance, increased sweating, increased appetite with weight loss, diarrhoea, infertility, oligomenorrhoea and amenorrhoea.</p> <p>In most patients the measurement of TSH receptor antibodies (TRAb) is not an essential investigation for diagnosing Grave's disease but is useful for determining the risk of neonatal hyperthyroidism in a pregnant woman with a history of Graves.</p>
<b>Part of Profile / See Also</b>	Thyroid peroxidase antibodies
<b>Request Form</b>	Combined Pathology manual Blood form or ICE request
<b>Availability / Frequency of Analysis</b>	<p>Referral test: Analysed by Immunology, Protein Reference Unit, Sheffield <a href="#">8494</a></p> <p>Available for requests from Consultant Endocrinologist or agreed with Immunology Clinical Scientist. For other requests, TRAb will usually only be undertaken in pregnancy or post-partum or if thyroid peroxidase antibodies are not positive (i.e. negative or weak positive).</p>
<b>Turnaround Time</b>	3 weeks
<b>Patient Preparation</b>	None required
<b>Sample Requirements</b>	*Please note a separate sample is required when Immunology tests are requested in addition to Biochemistry tests*
<b>Specimen Type</b>	Serum
<b>Volume</b>	2 ml
<b>Container</b>	 Yellow top (SST) tube  Yellow top (SST) tube
<b>Reference Range &amp; Units</b>	<p>Negative: 0 - 0.9 IU/L</p> <p>Equivocal: 1.0 - 1.5 IU/L</p> <p>Positive: &gt;1.5 IU/L.</p>
<b>Interferences</b>	None known
<b>Interpretation &amp; Clinical</b>	Positive TSH receptor antibody (TRAb) identifies the probable cause of hyperthyroidism is Graves' disease. The finding of persistently positive TRAb is

**Decision Value (if applicable)**

useful in indicating that apparent remission of Graves' disease is unlikely to be sustained.

TRAb measurement may also be helpful in classification of neonatal thyroid disease and aetiology of atypical eye disease.

Nearly all cases of neonatal hyperthyroidism are associated with maternal Graves' disease where the cause is transplacental passage of TRAb.

Please note: this assay does not differentiate between blocking and stimulating antibodies

**References**

<https://sheffieldlaboratorymedicine.nhs.uk/search-test.php?search=3473>

NICE Clinical Knowledge Summaries

2016 American Thyroid Association Guidelines for Diagnosis and Management of Hyperthyroidism and Other Causes of Thyrotoxicosis THYROID Vol 26, 10, 2016

DAVIES *et al.* **Thyroid Controversy—Stimulating Antibodies** *Journal of Clinical Endocrinology and Metabolism* Vol. **83**, No. 11

**Test code**

TRAB

**Lab Handling**

Aliquot and store at 4°C prior to testing and at -20°C or below for up to one month after receipt.

