

## TSH receptor autoantibody in human serum

### 2<sup>nd</sup> generation

### ELISA

### CE/FDA

Cat. No.:	TE1010	96 Tests
Range:	1 – 40 U/L (WHO 90/672)	
Sensitivity:	0,25 U/L	
Incubation time:	3.5 hours	
Sample volume:	100 µl	
Sample type:	Serum	
Sample preparation:	Samples can be kept up to 14 days at 2°C – 8°C or stored at -20°C. Repeated freezing and thawing should be avoided. Lipaemic or grossly haemolysed serum samples as well as plasma should not be used in the assay. When required, thaw test sera at room temperature and mix gently to ensure homogeneity.	
Reference values:	Negative	<1 U/L
	Grey zone	1,0 -2,0 U/L
	Positive	>2.0 U/L
Specificity:	Autoantibodies including rheumatoid factor, autoantibodies of thyroglobulin, thyroid peroxidase, ds DNA and acetylcholine receptor do not interfere in the assay. Furthermore, no effect is observed with human LH (up to 10 U/ml), human TSH (up to 30 U/ml), and human FSH (up to 70 U/ml).	

### Intended use:

The TSH receptor autoantibody 2<sup>nd</sup> generation test is an ELISA for the quantitative determination of autoantibodies against human TSH receptor in human serum. (B. Rees Smith, Thyroid 2004). The method is based on a porcine-TSH-Receptor and TSH labeled with Biotin.

In hyperthyroidism due to thyroid autonomy (Graves' disease) is induced by autoantibodies directed against the TSH receptor. Therefore, TSH receptor autoantibodies are detectable in patients suffering from untreated Graves' disease.

Determinations of TSH receptor autoantibodies are clinically used to confirm the diagnosis of Graves' disease and to differentiate the disease from disseminated autonomy of the thyroid. Around 98% of the patients with Graves' disease react positively in the TSH receptor antibody assay.

The determination of TSH receptor autoantibodies in the course of Graves' disease has predictive value and serves as an important tool in therapy monitoring. High levels of TSH receptor autoantibodies after longer-term thyrostatic therapy in patients with Graves' disease indicate an increased risk for recurrence. The measurement of TSH receptor autoantibodies may also be helpful in the field of ophthalmology as many patients showing symptoms of Graves' disease first consult an eye doctor.

References:

1. B. Rees Smith et al  
A new assay for thyrotropin receptor autoantibodies  
Thyroid 2004 14: 830-835
2. K. Kamij  
TSH receptor antibody measurement in patients with various thyrotoxicosis and Hashimoto's thyroiditis: a comparison of two-step assays, coated plate ELISA using porcine TSH receptor and coated tube radioassay using human recombinant TSH receptor.  
Endocrine Journal 2003 50: 113-116
3. Rees Smith B. Thyroid autoantibodies. The Scandinavian Journal of Clinical & Laboratory Investigation Supplement 61: 45-52 (2001).
4. Orgiazzi J. Anti-TSH receptor antibodies in clinical practice. Endocrinology and Metabolism Clinics of North America 29: 339-355 (2000).
5. Gupta MK. Thyrotropin-receptor antibodies in thyroid diseases: advances in detection techniques and clinical applications. Clinica Chimica Acta 293: 1-29 (2000).
6. Bolton J, Sanders J, Oda Y, Chapman C, Konno R, Furmaniak J, Rees Smith B.  
Measurement of thyroid-stimulating hormone receptor autoantibodies by ELISA. Clinical Chemistry 45: 2285-2287 (1999).

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