

PRODUCT SPECIFICATIONS

Name	Anti-h TSH 5409 SPTNE-5
Specificity	Antibody recognizes human thyrotropin
Description	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components
Product code	100034
Product buffer solution	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 25 % ethylene glycol, 0.095 % NaN ₃ as a preservative
Shelf life and storage	36 months from manufacturing at 2–8 °C
Analyte description	Thyroid-stimulating hormone (also known as TSH or thyrotropin) is a peptide hormone synthesized and secreted by thyrotrope cells in the anterior pituitary gland which regulates the endocrine function of the thyroid gland. TSH levels are tested in the blood of patients suspected of suffering from excess (hyperthyroidism), or deficiency (hypothyroidism) of thyroid hormone.

PARAMETERS TESTED ON EACH LOT

Product appearance	Liquid, may turn slightly opaque during storage
Product concentration	5.0 mg/ml (+/- 10 %)
Immunoreactivity	80–120 % compared to the reference sample in an FIA test
IEF Profile	5.8 – 7.2
Purity	≥ 95 %

PARAMETERS DETERMINED DURING PRODUCT DEVELOPMENT

Subclass	IgG ₁
Association rate constant	2.1×10^6 1/Ms
Dissociation rate constant	1.0×10^{-4} 1/s
Affinity constant	$K_A = 2.1 \times 10^{10}$ 1/M; $K_D = 4.8 \times 10^{-11}$ M (= 0.05 nM)
Determination method	SPR analysis (ProteOn XPR36)
Determination antigen	TSH, Scripps (Cat T0114, Lot 2414402)

Legal disclaimer

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Oy Medix Biochemica Ab

Headquarters and manufacturing
Klovinpellontie 3
FI-02180 Espoo, Finland

medix@medixbiochemica.com
www.medixbiochemica.com
VAT reg. no. FI4631532

Cross-reactivities

TSH α < 0.01 % (Scripps Laboratories, Cat T0214, Lot BE298001)
 TSH β 0.14 % (Scripps Laboratories, Cat T0314, Lot BA317002)
 hCG < 0.04 % (Scripps Laboratories, Cat C0714, Lot BB274002)
 LH < 0.04 % (Scripps Laboratories, Cat L0815, Lot BB236003)
 FSH < 0.04 % (Scripps Laboratories, Cat F0614, Lot BA127003)

Epitope

Group 2. The epitope is located at the junction of alpha and beta subunits in hTSH. The antibody recognizes intact hTSH molecule.

Pair recommendations

		DETECTION					
		5401	5404	5405	5407	5408	5409
CAPTURE	5401	-	-	+	+	-	+
	5404	-	-	+	+	-	+
	5405	-	-	-	-	+	+
	5407	-	-	-	-	+	+
	5408	-	-	+	+	-	+
	5409	-	-	+	+	-	-

Please note that pair recommendations are based on results obtained by our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations are only indicative.

Antibodies have been tested in FIA, CLIA, and LF applications.

Product stability

TEMPERATURE, TIME	RESULT
-70 °C, 21 days	Not Determined (N/D)
-20 °C, 14 days	OK
+4 °C, 14 days	OK
+35 °C, 14 days	OK
+45 °C, 7 days	OK

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody. Please note that the shelf life given on the first page is based on real time stability testing at 2–8 °C in the product buffer.

Miscellaneous

Antibody recognizes native TSH antigen, Lee Biosolutions 996-50 and 996-51.

References

Brockmann, E.-C., Pettersson, K and Vehniäinen M. (2010) Use of high-capacity surface with oriented recombinant antibody fragments in a 5-min immunoassay for thyroid-stimulating hormone. *Anal. Biochem.*, 396:242-249