

## PRODUCT SPECIFICATIONS

<b>Name</b>	Anti-h TSH 5407 SPTN-5
<b>Specificity</b>	Antibody recognizes human thyrotropin and its free beta subunit
<b>Description</b>	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components
<b>Product code</b>	100254
<b>Product buffer solution</b>	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 0.095 % NaN <sub>3</sub> as a preservative
<b>Shelf life and storage</b>	24 months from manufacturing at 2–8 °C
<b>Analyte description</b>	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

<b>Product appearance</b>	Liquid, may turn slightly opaque during storage
<b>Product concentration</b>	5.0 mg/ml (+/- 10 %)
<b>Immunoreactivity</b>	80–120 % compared to the reference sample in an FIA test
<b>IEF Profile</b>	5.6 – 7.0
<b>Purity</b>	≥ 95 %

## PARAMETERS DETERMINED DURING PRODUCT DEVELOPMENT

<b>Subclass</b>	IgG <sub>1</sub>
<b>Association rate constant</b>	$1.1 \times 10^6$ 1/Ms
<b>Dissociation rate constant</b>	$2.0 \times 10^{-4}$ 1/s
<b>Affinity constant</b>	$K_A = 5.4 \times 10^9$ 1/M; $K_D = 1.8 \times 10^{-10}$ M (= 0.18 nM)
<b>Determination method</b>	SPR analysis (ProteOn XPR36)
<b>Determination antigen</b>	TSH, Scripps (Cat T0114, Lot 2414402)

**Cross-reactivities**

TSH  $\alpha$  < 0.5 % (Scripps Laboratories, Cat T0214, Lot BE298774)  
 TSH  $\beta$  77.4 % (Scripps Laboratories, Cat T0314, Lot BA317002)  
 hCG < 0.5 % (Scripps Laboratories, Cat C0714, Lot BB274002)  
 LH < 0.5 % (Scripps Laboratories, Cat L0815, Lot BB236003)  
 FSH < 0.5 % (Scripps Laboratories, Cat F0614, Lot BA127003)

**Epitope**

Group 3

**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.

**Product stability**

TEMPERATURE, TIME	RESULT
-70 °C, 21 days	Not determined (N/D)
-20 °C, 21 days	OK
+4 °C, 21 days	OK
+30 °C, 21 days	OK
+35 °C, 21 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 996-51.

**References**

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