PRODUCT SPECIFICATIONS

Name
Anti-h TSH 5409 SPTNE-5

Specificity
Antibody recognizes human thyrotropin

Description
Monoclonal mouse antibody, cultured in vitro 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 % NaN₃ 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
6.0 – 6.7

Purity
≥ 95 %

PARAMETERS DETERMINED DURING PRODUCT DEVELOPMENT

Subclass
IgG₁

Association rate constant
2.1 x 10⁶ 1/Ms

Dissociation rate constant
1.0 x 10⁻⁴ 1/s

Affinity constant
Kₐ = 2.1 x 10⁻⁶ M⁻¹; Kₒ = 4.8 x 10⁻¹¹ M⁻¹ (= 0.05 nM)

Determination method
SPR analysis (ProteOn XPR36)

Determination antigen
TSH, Scripps (Cat T0114, Lot 2414402)
**Cross-reactivities**

<table>
<thead>
<tr>
<th>Protein</th>
<th>Cross-reactivity</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH α</td>
<td>&lt; 0.01 %</td>
<td>Scripps Laboratories, Cat T0214, Lot BE298001</td>
</tr>
<tr>
<td>TSH β</td>
<td>0.14 %</td>
<td>Scripps Laboratories, Cat T0314, Lot BA317002</td>
</tr>
<tr>
<td>hCG</td>
<td>&lt; 0.04 %</td>
<td>Scripps Laboratories, Cat C0714, Lot BB274002</td>
</tr>
<tr>
<td>LH</td>
<td>&lt; 0.04 %</td>
<td>Scripps Laboratories, Cat L0815, Lot BB236003</td>
</tr>
<tr>
<td>FSH</td>
<td>&lt; 0.04 %</td>
<td>Scripps Laboratories, Cat F0614, Lot BA127003</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>CAPTURE ANTIBODY</th>
<th>DETECTION ANTIBODY</th>
</tr>
</thead>
<tbody>
<tr>
<td>5409</td>
<td>5405, 5407</td>
</tr>
<tr>
<td>5405, 5407, 5401, 5404</td>
<td>5409</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>TEMPERATURE, TIME</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>-70 °C, 21 days</td>
<td>Not Determined (N/D)</td>
</tr>
<tr>
<td>-20 °C, 14 days</td>
<td>OK</td>
</tr>
<tr>
<td>+4 °C, 14 days</td>
<td>OK</td>
</tr>
<tr>
<td>+35 °C, 14 days</td>
<td>OK</td>
</tr>
<tr>
<td>+45 °C, 7 days</td>
<td>OK</td>
</tr>
</tbody>
</table>

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**

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**References**