

## PRODUCT SPECIFICATIONS

Date: 2013-03-12

<b>PRODUCT NAME</b>	:	Anti-h AAT 1003 SPTN-5
<b>PRODUCT SPECIFICITY</b>	:	Antibody recognizes human Alpha 1-Antitrypsin
<b>PRODUCT CODE</b>	:	100210
<b>PRODUCT BUFFER</b>	:	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 0.1 % NaN <sub>3</sub> as a preservative
<b>SHELF LIFE AND STORAGE</b>	:	24 months at 2-8 °C
<b>ANALYTE DESCRIPTION</b>	:	Alpha 1-Antitrypsin (AAT) is a single-chain glycoprotein consisting of 394 amino acids in the mature form and exhibits a number of glycoforms, and is generally known as serum trypsin inhibitor. It has a reference range in blood of 1.5 - 3.5 gram/liter, but the concentration can rise many fold upon acute inflammation. In its absence, elastase is free to break down elastin, which contributes to the elasticity of the lungs, resulting in respiratory complications such as emphysema, or COPD (chronic obstructive pulmonary disease) in adults and cirrhosis in adults or children. Disorders of this protein include alpha 1-antitrypsin deficiency, a hereditary disorder in which a deficiency of alpha 1-antitrypsin leads to a chronic uninhibited tissue breakdown. This causes the degradation especially of lung tissue, and eventually leads to characteristic manifestations of pulmonary emphysema.

## PARAMETERS TESTED FROM EACH LOT

<b>PRODUCT APPEARANCE</b>	:	Clear liquid, may precipitate during storage which does not alter the product specifications. Precipitate can be removed by centrifugation or filtering.
<b>PRODUCT CONCENTRATION</b>	:	5.0 mg/ml (+/- 10 %)
<b>PRODUCT ACTIVITY</b>	:	80 – 120 % compared to reference in an IFMA-test
<b>IEF-RANGE</b>	:	6.5 – 7.5
<b>PURITY</b>	:	≥ 95 %

## PARAMETERS DETERMINED ONLY DURING PRODUCT R&amp;D PHASE

<b>CLASS AND SUBCLASS</b>	:	IgG <sub>1</sub>
<b>ASSOCIATION CONSTANT</b>	:	N/D
<b>DISSOCIATION CONSTANT</b>	:	N/D
<b>AFFINITY CONSTANT</b>	:	N/D
<b>DETERMINATION METHOD</b>	:	-
<b>ANTIGEN</b>	:	-
<b>CROSS-REACTIVITIES</b>	:	Antibody binds both free AAT and its complex with Trypsin.

**EPITOPE** : N/D

**EPITOPE GROUP** :

Two antibodies binding to the same, or closely located epitopes, belong to the same group and hence cannot be used as a pair in a sandwich assay. Epitope group numbering does not give any detailed information where the epitope is located.

**PAIR RECOMMENDATIONS** : **SOLID** **LABEL**

N/D

Please note that pair recommendations are based on results obtained in our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations should be taken only as a directive.

**PRODUCT STABILITY** : **TEMPERATURE, DAYS** **RESULT**

Please note that the shelf life given on page one is based on real time stability testing at +2-8 °C in the product buffer.

-20 °C, 14 days	OK
+4 °C, 14 days	OK
+35 °C, 14 days	OK
+45 °C, 14 days	OK, charge changes

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody.

pH, 14 DAYS, +4 °C	RESULT
5.0	OK
6.0	OK
7.0	OK
8.0	Failed due to charge changes

Stability testing is performed to see whether pH affects the antigen binding, charge or composition of the antibody during 14 days at +4 °C.

**MISCELLANEOUS** : -

**REFERENCES** : -

### Legal disclaimer

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