



## EIA for Quantitative Determination of anti- $\beta$ 2-adrenergic-Receptor-Antibodies

### Introduction

The  $\beta$ -2 adrenergic receptor is a G protein-coupled receptor.  $\beta$  receptors have the subtypes  $\beta_1$ ,  $\beta_2$  and  $\beta_3$ . Autoantibodies against  $\beta_2$  adr-r are significantly elevated in patients suffering from chronic fatigue syndrome (CFS) / myalgic encephalomyelitis (ME).  $\beta$ -2 adrenergic receptor ( $\beta_2$  adr-r) autoantibodies are present in a subset of 20-30% of chronic fatigue syndrome patients.

The CellTrend anti- $\beta$ 2-adrenergic-receptor-antibody-EIA is designed for the determination of antibodies (IgG) against the  $\beta$ 2-adrenergic-receptor in serum and plasma.

### Principle of the assay

The CellTrend anti- $\beta$ 2-adrenergic-receptor-antibody-EIA is an antibody screening test. The  $\beta$ 2-adrenergic-receptor has been pre-coated onto a microtiter plate. During the first incubation the anti- $\beta$ 2-adrenergic-receptor-antibodies of the samples are immobilised on the plate. The auto-antibodies are detected with a POD labeled anti-human IgG antibody. In the following enzymatic substrate reaction the intensity of the colour correlates with the concentration and/ or avidity of anti- $\beta$ 2-adrenergic-receptor-antibodies

### Performance Characteristics

#### Standard curve:

5 standards between 2.5 U/ml and 40 U/ml

#### cut off (Löbel et al, Brain Behav Immun 2015):

positive (95% percentile): 14.0 Units/ml

at risk (90% percentile): 8.0 – 14.0 Units/ml

#### Sample materials:

Serum

#### Intraassay-Precision:

(n=10)

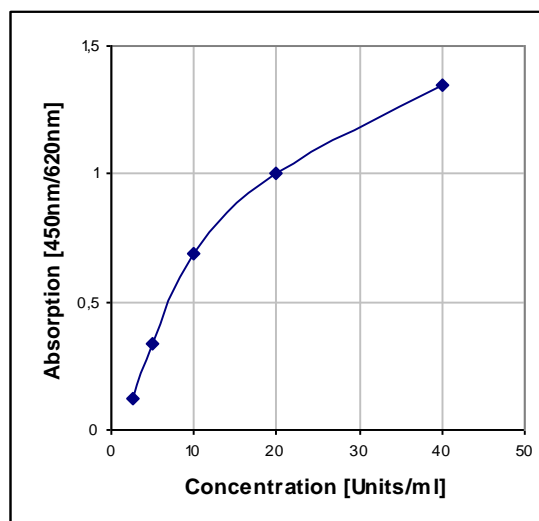
Sample 1 (38 U/ml): 7.3%

#### Interassay-Precision:

(n=20)

Sample 1 (38 U/ml): 10.8%

### Typical Standard Curve



### Assay Procedure

Incubation of samples/ standards/ controls	100 $\mu$ l	2 hrs, 4°C
Wash		
Incubation of detection antibody	100 $\mu$ l	1 hr, room temperature
Wash		
Substrate incubation	100 $\mu$ l/well	20 min, room temperature
Add Stopp solution	100 $\mu$ l/well	
Read at 450nm		

### Order informations

Product	Catalog number	Price (€)
EIA for Quantitative Determination of anti- $\beta$ 2 AR AA, 1x96 determ.	12700	-