EIA for Quantitative Determination of anti-Muscarinic Cholinergic Receptor 3 (M3)-Antibodies

Introduction

Muscarinic cholinergic receptors, or mAChRs, are acetylcholine receptors that form G protein-receptor complexes in the cell membranes of certain neurons and other cells. Autoantibodies against M3 AChR are significantly elevated in patients suffering from chronic fatigue syndrome (CFS) / myalgic encephalomyelitis (ME). Muscarinic acetylcholine receptor 3 (M3) autoantibodies are present in a subset of 20-30% of chronic fatigue syndrome patients.
The CellTrend anti-muscarinic cholinergic receptor 3 (M3)-antibody EIA is designed for the determination of antibodies against the muscarinic cholinergic receptor 3 (M3) in serum.

Principle of the assay

The CellTrend muscarinic cholinergic receptor 3 (M3)-EIA is an antibody screening test. M3 receptor has been pre-coated onto a microtiter plate. During the first incubation the anti-muscarinic cholinergic receptor 3-antibodies of the samples are immobilised on the plate. The autoantibodies 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-muscarinic cholinergic receptor 3-antibody.

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): 10.0 Units/ml

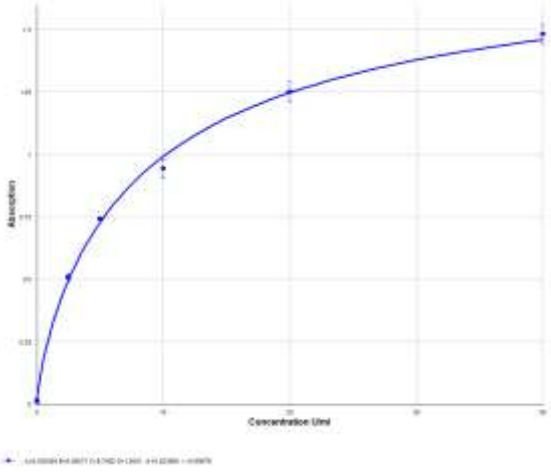
at risk (90% percentile): 6.0 – 10.0 Units/ml

Sample materials:
Serum

Intraassay-Precision:
(n=10)
Sample 1 (8.2 U/ml): 5.9%

Interassay-Precision:
(n=10)
Sample 1 (12,9 U/ml): 10,1%

Typical Standard Curve



Assay Procedure

Incubation of samples/ standards/ controls	100 µl	2 hrs, 4°C
Wash		
Incubation of detection antibody	100 µl	1 hr, room temperature
Wash		
Substrate incubation	100 µl/well	30 min, room temperature
Add Stopp solution	100 µl/well	
Read at 450nm		

Order informations

Product	Catalog number	Price (€)
EIA for Quantitative Determination of anti-M3-AB, 1x96 determin.	15300	-

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