



## EIA for Quantitative Determination of anti-Muscarinic Cholinergic Receptor 4 (M4)-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 M4 AChR are significantly elevated in patients suffering from chronic fatigue syndrome (CFS) / myalgic encephalomyelitis (ME). Muscarinic cholinergic receptor 4 (M4) autoantibodies are present in a subset of 20-30% of chronic fatigue syndrome patients..

The CellTrend anti-muscarinic cholinergic receptor 4 (M4)-Antibody EIA is designed for the determination of antibodies against the muscarinic cholinergic receptor 4 (M4) in serum.

### Principle of the assay

The CellTrend muscarinic cholinergic receptor 4 (M4)-EIA is an antibody screening test. M4 receptor has been pre-coated onto a microtiter plate. During the first incubation the anti-muscarinic cholinergic receptor 4-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 4-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): 7.0 Units/ml

at risk (90% percentile): 5.0 – 7.0 Units/ml

*Sample materials:*

Serum

*Intraassay-Precision:*

(n=10)

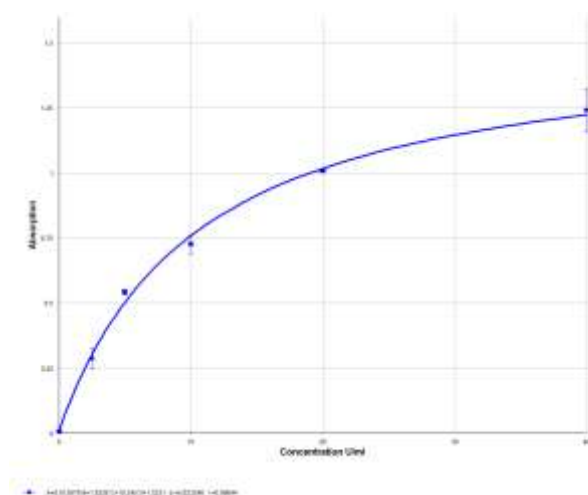
Sample 1 (6.6 U/ml): 7.3%

*Interassay-Precision:*

(n=10)

Sample 1 (8,8 U/ml): 12,5%

### 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-M4-AB, 1x96 determ.	15400	-

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distributed in the US/Canada by:

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***For further information about this kit, its application or the procedures in this kit insert, please contact the Technical Service Team at Eagle Biosciences, Inc. at [info@eaglebio.com](mailto:info@eaglebio.com) or at 866-411-8023.***

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