## **Technical Data Sheet**

# Purified Mouse Anti-Acetylcholine Receptor α

#### **Product Information**

**Material Number:** 610989 150 µg Size: 250 μg/ml Concentration:

26/Acetylcholine Receptor α Clone:

Rat Acetylcholine Receptor α aa. 332-457 Immunogen:

Mouse IgG2a Isotype: Reactivity: QC Testing: Mouse Tested in Development: Rat

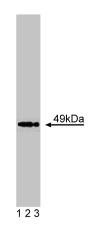
49 kDa

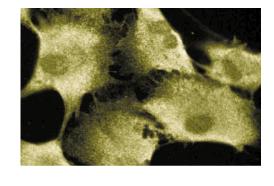
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium

#### Description

Target MW:

Acetylcholine is an amine neurotransmitter at the neuromuscular junction. It is released from the presynaptic membrane of a cholinergic synapse into the synaptic cleft. It diffuses across the cleft and binds acetylcholine receptors (AChR) on the postsynaptic membrane. Receptor binding induces postsynaptic membrane depolarization and the generation of an action potential that produces effects such as muscle contraction. The AChR is a 250kDa pentameric complex of four transmembrane subunits in a stoichiometry of α2βγδ. In response to ligand binding, all subunits participate in the formation of an integral cation channel. However, the acetylcholine binding site is primarily within the a subunit. Myasthenia gravis (MG) is an autoimmune condition in which AchR levels are decreased. Autoantibodies bind and crosslink the AchRs leading to their internalization and degradation. This results in a decreased number of functional AChRs. Patients develop muscular weakness and some voluntary muscle fatigue. However, development of MG is also affected by genetic factors. One of the allelic forms of the  $AChR\alpha$  gene appears to significantly contribute to MG susceptibility.





Western blot analysis of Acetylcholine Receptor a on BC3H1 Ivsate, Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of Acetylcholine Receptor a.

ВС3Н1

#### **Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

## **Application Notes**

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

## **BD Biosciences**

bdbiosciences.com

**United States** Asia Pacific Europe 877.232.8995 888.259.0187 32.53.720.550 0120.8555.90 65.6861.0633 55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how\_to\_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



### **Product Notices**

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

#### References

Garchon HJ, Djabiri F, Viard JP, Gajdos P, Bach JF. Involvement of human muscle acetylcholine receptor alpha-subunit gene (CHRNA) in susceptibility to myasthenia gravis. *Proc Natl Acad Sci U S A*. 1994; 91(11):4668-4672. (Biology)

Kincer JF, Uittenbogaard A, Dressman J, et al. Hypercholesterolemia promotes a CD36-dependent and endothelial nitric-oxide synthase-mediated vascular dysfunction. *J Biol Chem.* 2002; 277(26):23525-23533. (Clone-specific: Western blot)

Schroder B, Reinhardt-Maelicke S, Schrattenholz A. Monoclonal antibodies FK1 and WF6 define two neighboring ligand binding sites on Torpedo acetylcholine receptor alpha-polypeptide. *J Biol Chem.* 1994; 269(14):10407-10416. (Biology)

Spencer MJ, Guyon JR, Sorimachi H. Stable expression of calpain 3 from a muscle transgene in vivo: immature muscle in transgenic mice suggests a role for calpain 3 in muscle maturation. *Proc Natl Acad Sci U S A*. 2002; 99(13):8874-8879. (Clone-specific: Immunohistochemistry, Western blot)

Tsim KW, Greenberg I, Rimer M, Randall WR, Salpeter MM. Transcripts for the acetylcholine receptor and acetylcholine esterase show distribution differences in cultured chick muscle cells. *J Cell Biol*. 1992; 118(5):1201-1212. (Biology: Immunohistochemistry, Western blot)

610989 Rev. 1 Page 2 of 2