### SANTA CRUZ BIOTECHNOLOGY, INC.

# AChRα6 (R-20): sc-27295



#### BACKGROUND

Members of the ligand-gated ion channel receptor family are characterized by their fast transmitting response to neurotransmitters. Two important members of this family are the nicotinic acetylcholine and glutamate receptors, both of which are composed of five homologous subunits forming a transmembrane aqueous pore. These transmembrane receptors change conformation in response to their cognate neurotransmitter. Nicotinic acetylcholine receptors (AChRs) are found at the postsynaptic membrane of the neuromuscular junction and bind acetylcholine molecules, allowing ions to move through the pore. AChR $\alpha$ 6, also designated cholinergic nicotinic receptor  $\alpha$  polypeptide 6, is a neuronal acetylcholine receptor protein expressed in respiratory mucosa. AChR $\alpha$ 6 is also selectively expressed on dopaminergic terminals, where it complexes with AChR $\beta$ 2 and AChR $\alpha$ 4.

#### REFERENCES

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- 2. Zoli, M., Moretti, M., Zanardi, A., McIntosh, J.M., Clementi, F. and Gotti, C. 2002. Identification of the nicotinic receptor subtypes expressed on dopaminergic terminals in the rat striatum. J. Neurosci. 22: 8785-8789.
- 3. Mugnaini, M., Tessari, M., Tarter, G., Merlo, Pich. E., Chiamulera, C. and Bunnemann, B. 2002. Upregulation of [3H]methyllycaconitine binding sites following continuous infusion of nicotine, without changes of  $\alpha$ 7 or  $\alpha$ 6 subunit mRNA: an autoradiography and in situ hybridization study in rat brain. Eur. J. Neurosci. 16: 1633-1646.
- 4. Keiger, C.J., Case, L.D., Kendal-Reed, M., Jones, K.R., Drake, A.F. and Walker, J.C. 2003. Nicotinic cholinergic receptor expression in the human nasal mucosa. Ann. Otol. Rhinol. Laryngol. 112: 77-84.
- 5. Vailati, S., Moretti, M., Longhi, R., Rovati, G.E., Clementi, F. and Gotti, C. 2003. Developmental expression of heteromeric nicotinic receptor subtypes in chick retina. Mol. Pharmacol. 63: 1329-1337.
- 6. Groot-Kormelink, P.J., Broadbent, S.D., Boorman, J.P. and Sivilotti, L.G. 2004. Incomplete incorporation of tandem subunits in recombinant neuronal nicotinic receptors. J. Gen. Physiol. 123: 697-708.

#### CHROMOSOMAL LOCATION

Genetic locus: CHRNA6 (human) mapping to 8p11.21; Chrna6 (mouse) mapping to 8 A2.

#### SOURCE

AChR $\alpha$ 6 (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of AChR $\alpha$ 6 of rat origin.

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

AChRa6 (R-20) is recommended for detection of AChRa6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AChRa6 (R-20) is also recommended for detection of AChRa6 in additional species, including canine.

Suitable for use as control antibody for AChRa6 siRNA (h): sc-105031, AChRa6 siRNA (m): sc-140806, AChRa6 shRNA Plasmid (h): sc-105031-SH, AChRa6 shRNA Plasmid (m): sc-140806-SH, AChRa6 shRNA (h) Lentiviral Particles: sc-105031-V and AChRa6 shRNA (m) Lentiviral Particles: sc-140806-V.

Molecular Weight of AChR $\alpha$ 6: 57 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

## MONOS Satisfation Guaranteed

Try AChRa6 (G-4): sc-376966, our highly recommended monoclonal alternative to AChRa6 (R-20).