SANTA CRUZ BIOTECHNOLOGY, INC.

AChRα6 (G-4): sc-376966

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. AChRα6, also designated cholinergic nicotinic receptor α polypeptide 6, is a neuronal acetylcholine receptor protein expressed in respiratory mucosa. AChRα6 is also selectively expressed on dopaminergic terminals, where it complexes with AChRβ2 and AChRα4.

REFERENCES

1. Barabino, B., et al. 2001. An α4β4 nicotinic receptor subtype is present in chick retina: identification, characterization and pharmacological comparison with the transfected α4β4 and α6β4 subtypes. Mol. Pharmacol. 59: 1410-1417.
2. Zoli, M., et al. 2002. Identification of the nicotinic receptor subtypes expressed on dopaminergic terminals in the rat striatum. J. Neurosci. 22: 8785-8789.
3. Mugnaini, M., et al. 2002. Upregulation of [^{3}H]methyllycaconitine binding sites following continuous infusion of nicotine, without changes of α7 or α6 subunit mRNA: an autoradiography and *in situ* hybridization study in rat brain. Eur. J. Neurosci. 16: 1633-1646.

CHROMOSOMAL LOCATION

Genetic locus: CHRNA6 (human) mapping to 8p11.21.

SOURCE

AChRα6 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 399-437 within a cytoplasmic domain of AChRα6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AChRα6 (G-4) is available conjugated to agarose (sc-376966 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376966 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376966 PE), fluorescein (sc-376966 FITC), Alexa Fluor® 488 (sc-376966 AF488), Alexa Fluor® 546 (sc-376966 AF546), Alexa Fluor® 594 (sc-376966 AF594) or Alexa Fluor® 647 (sc-376966 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376966 AF680) or Alexa Fluor® 790 (sc-376966 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376966 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

AChRα6 (G-4) is recommended for detection of AChRα6 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for AChRα6 siRNA (h): sc-105031, AChRα6 shRNA Plasmid (h): sc-105031-SH and AChRα6 shRNA (h) Lentiviral Particles: sc-105031-V.

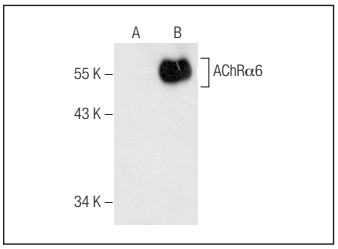
Molecular Weight of AChRα6: 57 kDa.

Positive Controls: AChRα6 (h): 293 Lysate: sc-158229.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



AChRα6 (G-4): sc-376966. Western blot analysis of AChRα6 expression in non-transfected: sc-110760 (**A**) and human AChRα6 transfected: sc-158229 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Paulo, J.A., et al. 2015. Global analysis of protein expression and phosphorylation levels in nicotine-treated pancreatic stellate cells. J. Proteome Res. 14: 4246-4256.

STORAGE

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

RESEARCH USE

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