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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Nicotine [NIC9D9] Bulk Size Ab03255-23.0-BT

This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG1 format for improved compatibility with existing reagents assays and techniques.

Isotype and Format: Rabbit IgG, Kappa

Clone Number: NIC9D9

Alternative Name(s) of Target: Nicotin; rac-3-(1-methylpyrrolidin-2-yl)pyridine; CAS: 54-11-5; CHEBI:18723; Nic12; 9D9

UniProt Accession Number of Target Protein:

Published Application(s): immunotherapy, ELISA

Published Species Reactivity: Species independent

Immunogen: The original antibody was generated by immunizing mice with keyhole limpet hemocyanin (KLH) conjugated nicotine hapten.

Specificity: This antibody is highly specific for S(-)-nicotine. Nicotine is a plant alkaloid, found in the tobacco plant and other plants of the nightshade family. It is an addictive central nervous system (CNS) stimulant that causes either ganglionic stimulation in low doses or ganglionic blockage in high doses. It is the main psychoactive ingredient in tobacco products and a major component of cigarettes, which is also used therapeutically to help with smoking cessation and reduce withdrawal symptoms.

Application Notes: The binding characterization of this antibody to nicotine-BSA hapten was done using ELISA (PMID: 11397142). A study to determine the effect of vaccination with this antibody towards a series of nicotine challenges and testing sessions was conducted. Passive immunization with NIC9D9 resulted in a 66.9% decrease in locomotor activity versus a 3.4% decrease in controls (PMID: 14738965). This antibody was also used in the generation of an adeno-associated virus (AAV) gene transfer vector which persistently expresses this antibody in vivo and prevents nicotine from reaching its receptors in the brain. This vector is called AAVantiNic and it generates an antibody similar to Nic9D9 that binds nicotine with an affinity of $K_d = 43$ nM. The mice treated with this vector showed 7 times greater amounts of nicotine in the serum of which 83% was bound to IgG. The vector blocked nicotine-mediated alterations in arterial blood pressure, heart rate and locomotor activity (PMID: 22745437).

Antibody First Published in: Carrera et al. Investigations using immunization to attenuate the psychoactive effects of nicotine. *Bioorg Med Chem.* 2004 Feb 1;12(3):563-70. [PMID:14738965](#)

Note on publication: The paper describes the use of this antibody in the immunopharmacotherapy for treating nicotine addiction.

Product Form

Size: 1 mg Purified antibody in bulk size.

Purification: Protein A affinity purified

Supplied In: PBS only.

Storage Recommendation: Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer

storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note - This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.