

Product Information

Nicotinic Receptor, Neuronal human

Membrane suspension

Catalog Number **N0540**

Storage Temperature -70°C

Synonyms: nAChR

Product Description

Nicotinic Receptor, Neuronal human is a frozen aliquot of membranes from human neuroblastoma cells.

Nicotinic acetylcholine receptors (nAChRs) are ligand-gated ion channels formed by a pentameric arrangement of α - and β -subunits to create distinct muscle and neuronal receptors. Neuronal receptors are found throughout the peripheral and central nervous system where they are involved in fast synaptic transmission. They belong to a superfamily of ligand-gated ion channels which allow the flow of sodium and potassium across the plasma membrane in response to ligands such as acetylcholine and nicotine.

Components

Each vial of membrane suspension contains 100 units of receptor. Membrane suspensions are supplied in 50 mM Tris, pH 7.4 at 25°C . The protein concentration is ~ 8.3 mg/mL. The receptor density is ~ 207 fmol/mg protein.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store tightly sealed at -70°C . The receptor can retain its original specific activity for several months when stored at -70°C in its original packing solution. Repeated freeze-thaw cycles of this product are not recommended.

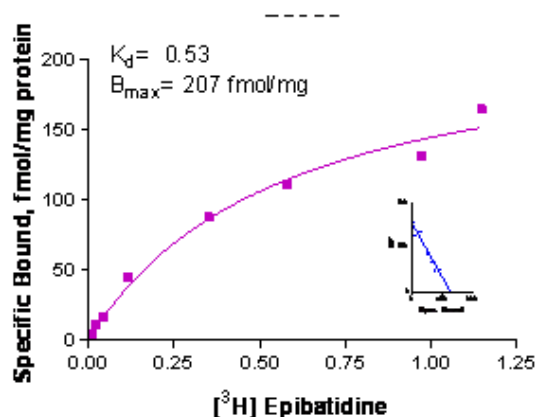
Procedure

1. Prepare Assay Buffer: 50 mM Tris-HCl containing 1 mM MgCl_2 , 2 mM CaCl_2 , 120 mM NaCl, 5 mM KCl and 0.003 mM Atropine Sulfate, pH 7.4 at 25°C .
2. Thaw vials quickly and resuspend the contents of vial in 80 mL of assay buffer. Homogenize and store on ice until addition to assay tubes.
3. Prepare a 0.5 nM solution of radioligand: [^3H] Epibatidine.
4. Prepare a 200 nM solution of Non-specific sample: Epibatidine.
5. Prepare the assay volume by combining 800 μL of receptor suspension, 100 μL of radioligand (0.05 nM final concentration) and 100 μL of non-specific sample (20 nM final concentration).
6. Incubate for 75 minutes at room temperature.
7. Use a GF/C filter pretreated with 0.5% PEI.
8. Wash the sample 5 times with ice cold 50 mM NaCl, 1 ml per tube.

Results

Typical results using standard binding assay described above. Results may vary from lot to lot.

Nicotinic Insensitive (H) Saturation Analysis



References

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