Rab 3A from rat brain, recombinant
N-Terminal histidine-tagged
expressed in E. coli

Product Number R 6022
Storage Temperature –70 °C

Product Description
Rab 3 is a member of a family of low molecular weight GTP binding proteins. It constitutes a subfamily of four highly homologous 25 kDa Rab 3 proteins of which Rab 3A is the most abundant. Rab 3A is expressed mainly in neuronal and endocrine cells, where it is located in synaptic or synaptic-related vesicles. Rab 3A is present in soluble and membrane-bound forms.

Rab 3A has a Cys-Ala-Cys sequence at the C-terminus, that undergoes geranylgeranylation at both cysteine residues followed by carboxymethylation of the C-terminus cysteine residue. These post-translational modifications are essential for the interaction of Rab 3A with Rab-GDP dissociation inhibitor (GDI). Rab 3A is implicated in membrane targeting and recognition, and is involved in the regulation of the late step in synaptic vesicle fusion.

Rat Rab 3A has high homology to human Rab 3A and the recombinant, rat His-tagged Rab 3A has an apparent molecular weight of 30 kDa.

The product is supplied in a solution containing 50% glycerol, 20 mM Tris-HCl, pH 8.0, 50 mM NaCl, 5 mM MgCl₂, 1 mM DTT, 0.5 mM AEBSF, and 2 µg/ml leupeptin.

The GDP binding capacity of the Rab 3A preparation is at least 0.25 mole/mole, as measured using ³H-GDP.

Purity: minimum 85% (SDS-PAGE)
SDS-PAGE conditions:
1. 5-fold dilution of product with water
2. 4-fold dilution of solution prepared in step 1 with Loading Buffer (12% SDS, 200 mM DTT, 0.1 mg/ml bromophenol blue, 40% glycerol, and 200 mM Tris pH 6.8).
3. Boil at 100 °C for 3 minutes.
4. Run on 12.5% acrylamide gel containing SDS.
5. Stain the gel with Coomassie® Brilliant Blue.

Precautions and Disclaimer
This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
The product ships on dry ice and it is recommended to store it at –70 °C. In order to avoid freeze/thaw cycles, it is recommended to store the remaining material in aliquots after the initial thaw. The product as supplied is stable for 3 years when stored properly.

References


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