DATA SHEET

Jena Bioscience

Rab5A

Ras-associated, small GTP-binding protein
rat, recombinant, *E. coli*

Cat. No.	Amount
PR-184	50 µg

For general laboratory use.

Shipping: shipped on dry ice

Storage Conditions: store at -80 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Molecular Weight: 24 kDa

Accession number: NP_073183

Purity: > 90 % (SDS-PAGE)

Form: liquid (Supplied in 25 mM HEPES pH 7.2, 40 mM NaCl, 2 mM $MgCl_2$, 10 µM GDP and 3 mM TCEP)

Description:
Rab5A is a small GTPase that belongs to the Ras superfamily. Rab proteins play an important role in various aspects of membrane traffic, including cargo selection, vesicle budding, vesicle motility, tethering, docking, and fusion. The small Rab5A GTPase is localized to plasma membrane, clathrin coated vesicles, caveosomes and early endosomes. Rab5 is a key regulator of the early endocytic pathway and plays a role in early endosome fusion and caveolar vesicle targeting to early endosomes. Furtermore it is also implicated in EGF receptor activation and apoptotic cell engulfment.

Activity:
100 pmol of protein can bind > 80 pmol of GDP.

Selected References:
Stenmark *et al.* (2001) The Rab GTPase family. *Genome Biol.* **2**:30071.

Yamaguchi *et al.* (2002) A GDP/GTP exchange protein for the Rab3 small G protein family up-regulates a postdocking step of synaptic exocytosis in central synapses. *Proc. Natl. Acad. Sci. USA.* **99**:14536.

Kitano *et al.* (2008) Imaging of Rab5 activity identifies essential regulators for phagosome maturation. *Nature* **453** (7192):24.