

Recombinant Mouse Rac1 Protein, Myc/DDK-tagged

Cat. No. Rac1-5344M Lot. No. (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length Rac family small GTPase 1 (Rac1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	<p>Plasma membrane-associated small GTPase which cycles between active GTP-bound and inactive GDP-bound states. In its active state, binds to a variety of effector proteins to regulate cellular responses such as secretory processes, phagocytosis of apoptotic cells, epithelial cell polarization, neurons adhesion, migration and differentiation, and growth-factor induced formation of membrane ruffles. Rac1 p21/rho GDI heterodimer is the active component of the cytosolic factor sigma 1, which is involved in stimulation of the NADPH oxidase activity in macrophages. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. Stimulates PKN2 kinase activity. In concert with RAB7A, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. In glioma cells, promotes cell migration and invasion. Required for atypical chemokine receptor ACKR2-induced LIMK1-PAK1-dependent phosphorylation of cofilin (CFL1) and for up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. In podocytes, promotes nuclear shuttling of NR3C2; this modulation is required for a proper kidney functioning. In neurons, is involved in dendritic spine formation and synaptic plasticity. In synapses, seems to mediate the regulation of F-actin cluster formation performed</p>

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	by SHANK3.
Molecular Mass	21.9 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Rac1 Rac family small GTPase 1 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Rac1
Synonyms	RAC1; RAS-related C3 botulinum substrate 1; ras-related C3 botulinum toxin substrate 1; p21-Rac1; AL023026; D5Ert559e
Gene ID	19353
mRNA Refseq	NM_009007
Protein Refseq	NP_033033
UniProt ID	P63001

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