

Active Recombinant Full Length Human Rac family small GTPase 3 Protein, His tagged

Cat. No. RAC3-18H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length human RAC3 was expressed in E.coli cells using an N-terminal His tag.
Species	Human
Source	E.coli
ProteinLength	1-192aa
Description	RAC3 is a member of the p160 family of steroid receptor coactivators and it is highly expressed in several human cancers, contributing to enhanced cell proliferation and cellular transformation. RAC3 is an underexamined member of the Rho GTPase gene family that is expressed in the developing brain and linked to key cellular functions. The Rac3 polypeptide is highly similar to Rac1, and orthologues of the gene for Rac3 have been found only in vertebrates, indicating the late appearance of this gene during evolution. Rac3 plays an important role in neuronal development and tumor progression, with specificities that distinguish the functions of Rac3 from the established functions of Rac1. De novo missense variants in the homolog RAC1 were recently associated with developmental disorders. RAC3 is a key regulator of adipogenesis since its downregulation generates the cellular arrest and autophagic responses that are required steps for this process.
Tag	N-His

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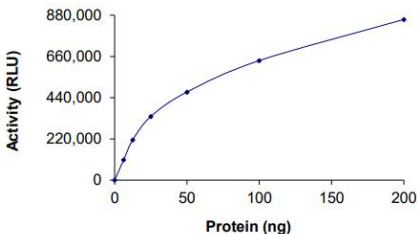
Bio-activity	5.7 nmol/min/mg
Molecular Mass	24 kDa
Purity	> 95%
Applications	WB, Enzyme Assay
Stability	One year at –70 centigrade from date of shipment.
Storage	Store product at –70 centigrade. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Storage Buffer	Supplied as sterile 50 mM sodium phosphate, pH 7.5, 300mM NaCl, 50-200mM imidazole, 0-0.1mM PMSF, 0.2-1.0mM DTT, 10-25% glycerol.
Concentration	0.1 µg/µL
Shipping	Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.
References	1. Lira MC, et al. (2018) Role of rac3 coactivator in the adipocyte differentiation. Cell Death Discov 4 20. 2. de Curtis I (2019) The rac3 gtpase in neuronal development, neurodevelopmental disorders, and cancer. Cells 8 (9): 1063. 3. Costain G, et al. (2019) De novo missense variants in rac3 cause a novel neurodevelopmental syndrome. Genet Med 21 (4): 1021-1026.

GENE INFORMATION

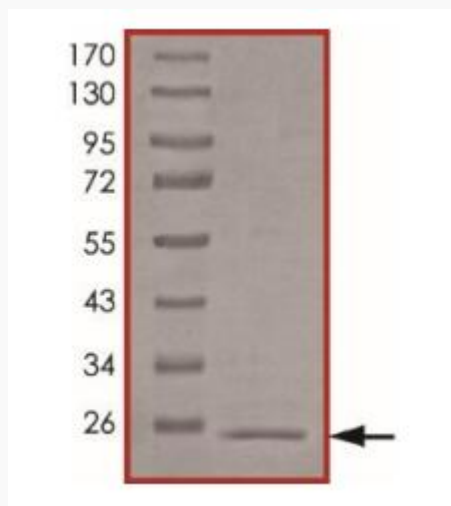
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Gene Name	RAC3 Rac family small GTPase 3 [Homo sapiens (human)]
Official Symbol	RAC3
Synonyms	RAC3; ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3); ras-related C3 botulinum toxin substrate 3; p21-Rac3; rho family, small GTP binding protein Rac3
Gene ID	5881
mRNA Refseq	NM_005052
Protein Refseq	NP_005043
MIM	602050
UniProt ID	P60763
Activity	 The specific activity of RAC3 was determined to be 5.7 nmol/min/mg as per activity assay protocol.

Purity



The purity of RAC3 was determined to be > 95% by densitometry.

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