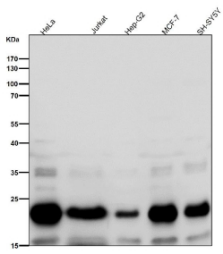
RAC3 Antibody / Ras related C3 botulinum toxin substrate 3 [clone 32R19] (FY12593)

Catalog No.	Formulation	Size
FY12593	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

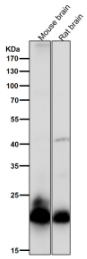
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32R19
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P60763
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200
Limitations	This RAC3 antibody is available for research use only.



All lanes use the RAC3 antibody at 1:2000 dilution for 1 hour at room temperature.
Predicted molecular weight ~21 kDa.



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Description

RAC3 antibody detects Ras related C3 botulinum toxin substrate 3, a small GTP binding protein encoded by the RAC3 gene. RAC3 belongs to the Rho family of small GTPases, which regulate actin cytoskeleton dynamics, cell adhesion, migration, and signaling. Like other Rho GTPases, RAC3 cycles between an inactive GDP bound state and an active GTP bound state, controlled by guanine nucleotide exchange factors and GTPase activating proteins. Through its activity, RAC3 contributes to cell proliferation, survival, and polarity.

RAC3 antibody is widely used in cancer research, neuroscience, and cell signaling studies. RAC3 promotes lamellipodia formation and actin remodeling, driving cell migration and invasion. In cancer, elevated RAC3 expression has been linked to tumor progression, metastasis, and therapy resistance. By detecting RAC3, researchers can study how GTPase signaling influences cytoskeletal regulation and oncogenic transformation.

Western blot assays detect RAC3 protein in diverse tissues and cell lines. Immunohistochemistry reveals expression in epithelial tissues and tumor samples, while immunofluorescence highlights subcellular distribution at lamellipodia and cell junctions. ELISA applications enable quantitative assessment of RAC3 expression across experimental samples.

RAC3 also plays roles in neuronal development and plasticity. In the brain, RAC3 regulates axon guidance, dendritic spine formation, and synaptic signaling. Dysregulation of RAC3 has been associated with intellectual disability, psychiatric disorders, and neurodegeneration. By applying RAC3 antibody, scientists can evaluate how GTPase signaling contributes to neuronal structure and function.

Beyond the nervous system and cancer, RAC3 participates in immune responses, angiogenesis, and wound healing. Its broad impact across tissues makes it an important target for basic and translational research. The antibody therefore serves as a versatile reagent for exploring cytoskeletal and signaling pathways across biology.

RAC3 antibody from NSJ Bioreagents provides reliable specificity for studying small GTPase regulation in health and disease. Its performance across multiple methods ensures accurate detection of RAC3 in cellular and tissue contexts.

Application Notes

Optimal dilution of the RAC3 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human RAC3 was used as the immunogen for the RAC3 antibody.

Storage

Store the RAC3 antibody at -20oC.