# RAC2 Blocking Peptide (C-Term) Blocking Peptide

## PRODUCT OVERVIEW

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| **Product Name** | RAC2, Blocking Peptide |
| **Full Product Name** | RAC2 Blocking Peptide (C-term) |
| **Product Gene Name** | RAC2 blocking peptide |
| **Product Synonym Names** | Ras-related C3 botulinum toxin substrate 2; GX; Small G protein; p21-Rac2; RAC2 |
| **Form/Format** | Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml. |
| **Specificity** | The synthetic peptide sequence is selected from aa 178-188 of HUMAN RAC2 |
| **Preparation and Storage** | Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C. |
| **Antibody/Peptide Pairs** | RAC2 peptide (MBS9229974) is used for blocking the activity of RAC2 antibody (MBS9206057) |
| **Molecular Weight** | 21,429 Da |
| **OMIM** | 602049 |
| **Cellular Location** | Cytoplasm. Note: Membrane-associated when activated |
| **Tissue Location** | Hematopoietic specific. |
| **Related Product Information for RAC2 blocking peptide** | Plasma membrane-associated small GTPase which cycles between an active GTP-bound and inactive GDP-bound state. In active state binds to a variety of effector proteins to regulate cellular responses, such as secretory processes, phagocytose of apoptotic cells and epithelial cell polarization. Augments the production of reactive oxygen species (ROS) by NADPH oxidase. |
| **Other Notes** | Small volumes of RAC2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for RAC2 purchase** | MBS9229974 is a blocking peptide targeting RAC2. Also known as RAC2 Blocking Peptide (C-term). |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RAC2. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 131806 |
| **NCBI GeneID** | 5880 |
| **NCBI Accession #** | P15153.1 |
| **UniProt Primary Accession #** | P15153 |
| **UniProt Secondary Accession #** | Q9UDJ4 |
| **UniProt Related Accession #** | P15153; AAB22207 |
| **NCBI Official Full Name** | Ras-related C3 botulinum toxin substrate 2 |
| **NCBI Official Synonym Full Names** | ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) |
| **NCBI Official Symbol** | RAC2 |
| **NCBI Official Synonym Symbols** | Gx; EN-7; HSPC022; p21-Rac2 |

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| **UniProt Protein Name** | Ras-related C3 botulinum toxin substrate 2 |
| **UniProt Synonym Protein Names** | GX; Small G protein; p21-Rac2 |
| **Protein Family** | Rac-like GTP-binding protein |
| **UniProt Gene Name** | RAC2 |
| **UniProt Entry Name** | RAC2_HUMAN |
| **NCBI Protein Information** | ras-related C3 botulinum toxin substrate 2 |
| **NCBI Summary for RAC2** | This gene encodes a member of the Ras superfamily of small guanosine triphosphate (GTP)-metabolizing proteins. The encoded protein localizes to the plasma membrane, where it regulates diverse processes, such as secretion, phagocytosis, and cell polarization. Activity of this protein is also involved in the generation of reactive oxygen species. Mutations in this gene are associated with neutrophil immunodeficiency syndrome. There is a pseudogene for this gene on chromosome 6. [provided by RefSeq, Jul 2013] |
| **UniProt Comments for RAC2** | RAC2: Plasma membrane-associated small GTPase which cycles between an active GTP-bound and inactive GDP-bound state. In active state binds to a variety of effector proteins to regulate cellular responses, such as secretory processes, phagocytose of apoptotic cells and epithelial cell polarization. Augments the production of reactive oxygen species (ROS) by NADPH oxidase. Interacts with DOCK2, which may activate it. Hematopoietic specific. Regulated by guanine nucleotide exchange factors (GEFs) which promote the exchange of bound GDP for free GTP, GTPase activating proteins (GAPs) which increase the GTP hydrolysis activity, and GDP dissociation inhibitors which inhibit the dissociation of the nucleotide from the GTPase. Belongs to the small GTPase superfamily. Rho family.<br><br>Protein type: G protein, monomeric, Rho; G protein; G protein, monomeric; Motility/polarity/chemotaxis<br><br>Chromosomal Location of Human Ortholog: 22q13.1<br><br>Cellular Component: actin filament; cytosol; focal adhesion; lamellipodium; phagocytic vesicle membrane; plasma membrane<br><br>Molecular Function: GTP binding<br><br>Biological Process: actin filament organization; platelet activation; regulation of hydrogen peroxide metabolic process; regulation of small GTPase mediated signal transduction; signal transduction<br><br>Disease: Neutrophil Immunodeficiency Syndrome |
| **Research Articles on RAC2** | **1.** RAC2 specifically interacted with a set of mitochondrial proteins. |
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