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Datasheet for ABIN7505013
RAC1 Protein (AA 2-177) (His tag)

Overview

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| Quantity: | 100 µg |
| Target: | RAC1 |
| Protein Characteristics: | AA 2-177 |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This RAC1 protein is labelled with His tag. |

Product Details

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| Sequence: | Gln2-Leu177 |
| Characteristics: | A DNA sequence encoding the Human RAC1 protein (P63000) (Gln2-Leu177) was expressed with a N-His. |
| Purity: | > 95 % as determined by reducing SDS-PAGE. |

Target Details

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| Target: | RAC1 |
| Abstract: | RAC1 Products |
| Background: | Abbreviation: RAC1 Target Synonym: Cell migration-inducing gene 5 protein, Ras-like protein TC25, p21-Rac1 Background: RAC1 is a GTPase that belongs to the RAS superfamily of small GTP-binding proteins. Members of this superfamily appear to regulate a diverse array of cellular events, |

Target Details

including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases. Two transcript variants encoding different isoforms have been found for RAC1 gene. RAC1 is a 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 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 macrophage. RAC1 is essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. RAC1's isoform B has an accelerated GEF-independent GDP/GTP exchange and an impaired GTP hydrolysis, which is restored partially by GTPase-activating proteins. It is able to bind to the GTPase-binding domain of PAK but not full-length PAK in a GTP-dependent manner, suggesting that the insertion does not completely abolish effector interaction.

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| Molecular Weight: | Calculated MW: 19.6 kDa Observed MW: 22 kDa |
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| UniProt: | P63000 |
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| Pathways: | WNT Signaling , Regulation of Actin Filament Polymerization , Cell-Cell Junction Organization , Thromboxane A2 Receptor Signaling , VEGF Signaling |
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Application Details

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| Restrictions: | For Research Use only |
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Handling

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| Format: | Lyophilized |
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| Buffer: | Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. |
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| Storage: | 4 °C,-20 °C,-80 °C |
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| Storage Comment: | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
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| Expiry Date: | 12 months |
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