

## Active Recombinant Human RAC1 Protein, GST-tagged

**Cat. No.** RAC1-1625H    **Lot. No.** (See product label)

### SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b>  | Recombinant full-length human RAC1 was expressed in E. coli cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>            | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>     | 1-192 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>       | RAC1 is a member of the Rho family and is a GTPase that is part of the small GTP-binding protein superfamily. RAC1 is involved in a diverse array of cellular events, including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases. Role of RAC1 in colorectal cancer has been reported after analysis of the protein expression level and activities of this protein in matched sets of tumor and non-tumor tissues. |
| <b>Applications</b>      | Kinase Assay; Western Blot                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Molecular Weight</b>  | 47 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Expression System</b> | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Form</b>              | Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.                                                                                                                                                                                                                                                                                                                       |

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|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>        | > 95 %                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Concentration</b> | 0.2 ug/ul                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Sequences</b>     | Full-length                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>       | Store product at -70°C. 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.                                                                                                                                                                                                                             |
| <b>Pathways</b>      | Adherens junction; Amyotrophic lateral sclerosis (ALS); Axon guidance; B cell receptor signaling pathway; Chemokine signaling pathway; Colorectal cancer; Epithelial cell signaling in Helicobacter pylori infection; Fc epsilon RI signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; Leukocyte transendothelial migration; MAPK signaling pathway; Natural killer cell mediated cytotoxicity; Neurotrophin signaling pathway; Pancreatic cancer |

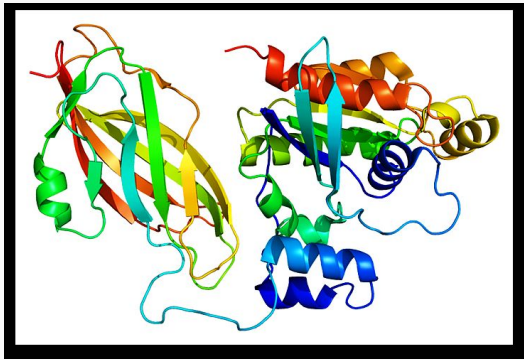
## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | RAC1 ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) [ Homo sapiens ]                                                                                                                                                                                                                                                                                        |
| <b>Official Symbol</b> | RAC1                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>        | RAC1; ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1); MIG5; Rac-1; TC-25; p21-Rac1; MGC111543; ras-related C3 botulinum toxin substrate 1; OTTHUMP00000151196; OTTHUMP00000151197; ras-like protein TC25; cell migration-inducing gene 5 protein; Ras-related C3 botulinum toxin substrate 1; Cell migration-inducing gene 5 protein; Ras-like protein TC25 |
| <b>Gene ID</b>         | 5879                                                                                                                                                                                                                                                                                                                                                                                                 |

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|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| mRNA Refseq                 | NM_006908                                                                                                                              |
| Protein Refseq              | NP_008839                                                                                                                              |
| MIM                         | 602048                                                                                                                                 |
| UniProt ID                  | P63000                                                                                                                                 |
| Chromosome Location         | 7p22                                                                                                                                   |
| Function                    | GTP binding; GTP-dependent protein binding; GTPase activity; enzyme binding; nucleotide binding; protein binding; thioesterase binding |
| PDBrendering based on 1ds6. |                                                     |