

## Recombinant Human Mitogen-Activated Protein Kinase 7, GST-Tagged

Cat. No. MAPK7-1050H    Lot. No. (See product label)

### SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>  | Recombinant full-length human ERK5 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>            | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>       | ERK5 is a member of the MAP kinase family and is involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. ERK5 is activated by mitogen-activated protein kinase kinase 5 (MAP2K5/MEK5) and is involved in downstream signaling processes of various receptors. In response to extracellular signals, ERK5 translocates to cell nucleus where it regulates gene expression by phosphorylating and activating different transcription factors. Gene deletion of ERK5 in mice results in defective blood vessel and cardiac development leading to embryonic lethality. ERK5 has been shown to be critical for endothelial function and maintenance of blood vessel integrity. |
| <b>Applications</b>      | Kinase Assay, Western Blot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Molecular Weight</b>  | 132 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Expression System</b> | Sf9 insect cells using baculovirus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Form</b>              | Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                          |                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | glutathione, 0.25 mM DTT, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol.                                                                                                                                                                                                                                                                                                                         |
| <b>Specific Activity</b> | 11 nmol/min/mg                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purity</b>            | > 75 %                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Concentration</b>     | 0.1 ug/ul                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Sequences</b>         | Full-length                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage</b>           | Store product at –70oC. 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>          | Activated TLR4 signalling; EGFR1 Signaling Pathway; ERK/MAPK targets; ERKs are inactivated; ErbB1 downstream signaling; Focal Adhesion; Gap junction; GnRH signaling pathway; IL-3 Signaling Pathway; Innate Immunity Signaling; Insulin Signaling; Integrin-mediated cell adhesion; MAP kinase activation in TLR cascade; MAPK signaling pathway; MicroRNAs in cardiomyocyte hypertrophy |
| <b>GENE INFORMATION</b>  |                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Gene Name</b>         | MAPK7 mitogen-activated protein kinase 7 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                 |
| <b>Official Symbol</b>   | MAPK7                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Synonyms</b>          | MAPK7; BMK1; ERK4; ERK5; PRKM7; ERK-5; BMK1 kinase; MAP kinase 7; big MAP kinase 1extracellular signal-regulated kinase 5; extracellular-signal-regulated kinase 5; BMK-1mitogen-activated protein kinase 7; OTTHUMP00000065906; OTTHUMP00000065907; EC=2.7.11.24                                                                                                                         |

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                     |                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------|
| Gene ID             | 5598                                                                                                            |
| mRNA Refseq         | NM_139032                                                                                                       |
| Protein Refseq      | NP_620601                                                                                                       |
| MIM                 | 602521                                                                                                          |
| UniProt ID          | Q13164                                                                                                          |
| Chromosome Location | 17p11.2                                                                                                         |
| Function            | ATP binding; MAP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity |

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA