

# Rabbit Monoclonal Antibody to Human Mitogen-activated Protein Kinase 9

**Cat. No.** CAB11582RH    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Product Overview</b>    | Rabbit Monoclonal Antibody to Human Mitogen-activated Protein Kinase 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>              | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Antigen Description</b> | <p>Mitogen-activated protein kinase 9 (MAPK9), also well known as c-Jun N-terminal kinase (JNK2), is a member of MAP kinase subfamily belonging to the protein kinase superfamily. As an integration point for multiple biochemical signals, MAPKs are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. MAPK9 responds to activation by environmental stress and pro-inflammatory cytokines by phosphorylating a number of transcription factors, such as c-Jun and ATF2. It is most closely related to MAPK8, both of which are involved in UV radiation induced apoptosis. JNK protein kinases includes JNK1 and JNK2, and the activity of JNK2 was approximately 10-fold greater than that of JNK1 in c-Jun phosphorylation. JNK2 is activated by threonine and tyrosine phosphorylation by either of two dual specificity kinases, MAP2K4 and MAP2K7. In T-cells, JNK1 and JNK2 are required for polarized differentiation of T-helper cells into Th1 cells. In addition, JNK2 blocks the ubiquitination of tumor suppressor p53, and thus increases the stability of p53 in nonstressed cells. Several alternatively spliced transcript variants of JNK2 with different binding patterns have been identified: alpha-1 and alpha-2 preferentially bind to c-Jun, whereas beta-1 and beta-2 bind to ATF2. However, there is no correlation between binding and</p> |

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|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | phosphorylation, which is achieved at about the same efficiency by all isoforms.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>  | Human JNK2 / MAPK9. No cross-reactivity with human cell lysate ( 293 cell line ) in WB and ELISA.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Immunogen</b>    | Recombinant Human JNK2 / MAPK9 Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Isotype</b>      | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Clone</b>        | A005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Applications</b> | Western blot; ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Dilution</b>     | Western blot: This antibody can be used at 1-2 µg/mL with the appropriate secondary reagents to detect Human MAPK9 in WB. Using a DAB detection system, the detection limit for Human MAPK9 is approximately 0.25 ng/lane under non-reducing conditions and 0.125 ng/lane under reducing conditions. Direct ELISA: This antibody can be used at 0.1-0.2 µg/mL with the appropriate secondary reagents to detect Human MAPK9. The detection limit for Human MAPK9 is approximately 0.00245 ng/well. |
| <b>Preparation</b>  | This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant Human JNK2 / MAPK9                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Format</b>       | 0.2 µm filtered solution in PBS with 5% trehalose                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage</b>      | This antibody can be stored at 2-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be                                                                                                                                                               |

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disposed of properly. Avoid repeated freeze-thaw cycles.

## GENE INFORMATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | MAPK9 mitogen-activated protein kinase 9 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                    |
| <b>Official Symbol</b>     | MAPK9                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>            | MAPK9; mitogen-activated protein kinase 9; PRKM9; JNK2; Jun kinase; p54a; SAPK; MAPK 9; MAP kinase 9; c-Jun kinase 2; c-Jun N-terminal kinase 2; stress-activated protein kinase 1a; stress-activated protein kinase JNK2; JNK2A; JNK2B; JNK-55; SAPK1a; JNK2BETA; p54aSAPK; JNK2ALPHA;                                                                                                                      |
| <b>Gene ID</b>             | 5601                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>         | NM_001135044                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Protein Refseq</b>      | NP_001128516                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>MIM</b>                 | 602896                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID</b>          | P45984                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 5q35                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Pathway</b>             | ATF-2 transcription factor network, organism-specific biosystem; Activated TLR4 signalling, organism-specific biosystem; Activation of the AP-1 family of transcription factors, organism-specific biosystem; Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; CD40/CD40L signaling, organism-specific biosystem; CDC42 signaling events, |

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organism-specific biosystem;

**Function**

ATP binding; JUN kinase activity; MAP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity; transcription factor binding;

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