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37-1253: Human JNK2 / MAPK9 Recombinant Protein (His Tag)(Discontinued)

Reactivity : Human

Alternative Name : JNK-55 Protein, JNK2 Protein, JNK2A Protein, JNK2ALPHA Protein, JNK2B Protein, JNK2BETA Protein, p54a Protein, p54aSAPK Protein, PRKM9 Protein, SAPK Protein, SAPK1a Protein,

Description

Source : Baculovirus-Insect Cells
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. MAPK9 responds to activation by environmental stress and pro-inflammatory cytokines by phosphorylating a number of transcription factors, such as c-Jun and ATF2. The crystal structure of human JNK2 complexed with an indazole inhibitor by applying a high-throughput protein engineering and surface-site mutagenesis approach. A novel conformation of the activation loop is observed, which is not compatible with its phosphorylation by upstream kinases. This activation inhibitory conformation of JNK2 is stabilized by the MAP kinase insert that interacts with the activation loop in an induced-fit manner. It suggest that the MAP kinase insert of JNK2 plays a role in the regulation of JNK2 activation, possibly by interacting with intracellular binding partners. JNK2 deficiency leads to reduced c-Jun degradation, thereby augmenting c-Jun levels and cellular proliferation, and suggests that JNK2 is a negative regulator of cellular proliferation in multiple cell types. JNK2 prevents replicative stress by coordinating cell cycle progression and DNA damage repair mechanisms. JNK2 blocks the ubiquitination of tumor suppressor p53, and thus increases the stability of p53 in nonstressed cells. JNK2 negatively regulates antigen-specific CD8+ T cell expansion and effector function, and thus selectively blocking JNK2 in CD8+ T cells may potentially enhance anti-tumor immune response. Lack of JNK2 expression was associated with higher tumor aneuploidy and reduced DNA damage response. Additionally,the JNK2 protein could be a novel therapeutic target in dry eye disease, and may provide a novel target for prevention of vascular disease and atherosclerosis.

Product Info

Amount : Human JNK2 / MAPK9 Recombinant Protein (His Tag)(Discontinued) / 50 µg

Purification : > 90 % as determined by SDS-PAGE

Content : Formulation Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol, 0.5mM EDTA, 0.5mM PMSF
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Storage condition : Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Amino Acid : Met1-Arg424

Application Note

Endotoxin :< 1.0 EU per Ã□Âµg of the protein as determined by the LAL method

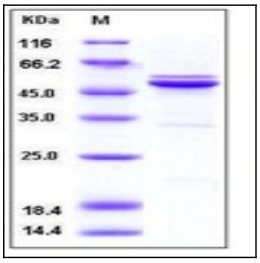

Fig 1: Human JNK2 / MAPK9 Recombinant Protein (His Tag)