

JNK1 Protein, Human, Recombinant (GST)

General Information

Synonyms:	PRKM8;JNK;JNK-46;JNK21B1/2;JNK1A2;mitogen-activated protein kinase 8;SAPK1;JNK1;SAPK1c
Protein Construction:	A DNA sequence encoding the full length of human MAPK8 isoform JNK1 alpha 2 (NP_620637.1) (Met 1-Arg 427) was expressed with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P45983-1
Molecular Weight:	75 kDa (predicted); 65 kDa (reducing conditions)

QC Testing

Biological Activity:	No Kinase Activity
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 100 mM NaCl, pH 8.0, 25% glycerol.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Mitogen-activated protein kinase 8 (MAPK8), also known as JNK1, is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation, and development. The protein kinases JNK1 has been found to serve as critical molecular links between obesity, metabolic inflammation, and disorders of glucose homeostasis. It is critically involved in the promotion of diet-induced obesity, metabolic inflammation, and beta-cell dysfunction. The selective deficiency of JNK1 in the murine nervous system is sufficient to suppress diet-induced obesity. Genetic analysis indicates that the effects of JNK1 can be separated from the effects of JNK1

on obesity. JNK1 is a potential pharmacological target for the development of drugs that might be useful for the treatment of metabolic syndrome, and type 2 diabetes. Furthermore, JNK1 plays a major role in hypoxic cellular damage. JNK1 protein might be an attractive target for anti-hypoxic therapy in increasing resistance to many pathological conditions and diseases, leading to the oxygen deficit.

Reference

Betigeri S, et al. (2006) JNK1 as a molecular target to limit cellular mortality under hypoxia. *Mol Pharm.* 3(4): 424-30.

Solinas G, et al. (2010) JNK1 and IKKbeta: molecular links between obesity and metabolic dysfunction. *FASEB J.* 24(8): 2596-611.

Sabio G, et al. (2010) Role of the hypothalamic-pituitary-thyroid axis in metabolic regulation by JNK. *Genes Dev.* 24(3): 256-64.

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