10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Mapk12 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP14265b

Specification

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O08911

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 29857

Other Names
Mitogen-activated protein kinase 12, MAP kinase 12, MAPK 12, Extracellular signal-regulated kinase 6, ERK-6, Mitogen-activated protein kinase p38 gamma, MAP kinase p38 gamma, Stress-activated protein kinase 3, Mapk12, Sapk3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Protein Information

Name Mapk12

Synonyms Sapk3

Function
Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK12 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as pro-inflammatory cytokines or physical stress leading to direct activation of transcription factors such as ELK1 and ATF2. Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each. Some of the targets are downstream kinases such as MAPKAPK2, which are activated through phosphorylation and further phosphorylate additional targets. Plays a role in myoblast differentiation and also in the down-regulation of cyclin D1 in response to hypoxia in adrenal cells suggesting MAPK12 may inhibit cell proliferation while promoting differentiation. Phosphorylates DLG1. Following osmotic shock, MAPK12 in the cell nucleus increases its association with nuclear DLG1, thereby causing dissociation of DLG1-SFPQ complexes. This function is independent of its catalytic activity and could affect mRNA processing and/or gene transcription to aid cell adaptation to osmolarity changes in the environment. Regulates UV-induced checkpoint signaling and repair of UV-induced

DNA damage and G2 arrest after gamma-radiation exposure. MAPK12 is involved in the regulation of SLC2A1 expression and basal glucose uptake in L6 myotubes; and negatively regulates SLC2A4 expression and contraction-mediated glucose uptake in adult skeletal muscle. C-Jun (JUN) phosphorylation is stimulated by MAPK14 and inhibited by MAPK12, leading to a distinct AP-1 regulation. MAPK12 is required for the normal kinetochore localization of PLK1, prevents chromosomal instability and supports mitotic cell viability. MAPK12- signaling is also positively regulating the expansion of transient amplifying myogenic precursor cells during muscle growth and regeneration.

Cellular Location
Cytoplasm. Nucleus. Mitochondrion. Note=Mitochondrial when associated with SH3BP5. In skeletal muscle colocalizes with SNTA1 at the neuromuscular junction and throughout the sarcolemma.

Tissue Location
Highly expressed in skeletal muscle. Also expressed in the heart, particularly in cardiac myocytes, lung, thymus and testes.

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Images

Mouse Mapk12 Antibody (C-term) Blocking Peptide - Background

Mapk12 responds to activation by environmental stress and pro-inflammatory cytokines by phosphorylating downstream targets. Plays a role in myoblast differentiation and also in the down-regulation of cyclin D1 in response to hypoxia in adrenal cells suggesting MAPK12 may inhibit cell proliferation while promoting differentiation (By similarity).

Mouse Mapk12 Antibody (C-term) Blocking Peptide - References

Lovett, F.A., et al. Endocrinology 151(9):4368-4380(2010)Gillespie, M.A., et al. J. Cell Biol. 187(7):991-1005(2009)Pogozelski, A.R., et al. PLoS ONE 4 (11), E7934 (2009) :Ruiz-Bonilla, V., et al. Cell Cycle 7(14):2208-2214(2008)Valerius, M.T., et al. Gene Expr. Patterns 8(5):297-306(2008)