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MAPK15 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP7554a

Specification

MAPK15 Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q8TD08

MAPK15 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 225689

Other Names
Mitogen-activated protein kinase 15, MAP kinase 15, MAPK 15, Extracellular signal-regulated kinase 7, ERK-7, Extracellular signal-regulated kinase 8, ERK-8, MAPK15, ERK7, ERK8

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7554a was selected from the N-term region of human ERK8. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

MAPK15 Antibody (N-term) Blocking peptide - Protein Information

Name MAPK15 (HGNC:24667)

Function
Atypical MAPK protein that regulates several process such as autophagy, ciliogenesis, protein trafficking/secretion and genome integrity, in a kinase activity-dependent manner (PubMed:20733054, PubMed:21847093, PubMed:22948227, PubMed:24618899, PubMed:29021280). Controls both, basal and starvation-induced autophagy throught its interaction with GABARAP, MAP1LC3B and GABARAPL1 leading to autophagosome formation, SQSTM1 degradation and reduced MAP1LC3B inhibitory phosphorylation (PubMed:22948227). Regulates

primary cilium formation and the localization of ciliary proteins involved in cilium structure, transport, and signaling (PubMed:29021280). Prevents the relocation of the sugar-adding enzymes from the Golgi to the endoplasmic reticulum, thereby restricting the production of sugar- coated proteins (PubMed:24618899). Upon amino-acid starvation, mediates transitional endoplasmic reticulum site disassembly and inhibition of secretion (PubMed:21847093). Binds to chromatin leading to MAPK15 activation and interaction with PCNA, that which protects genomic integrity by inhibiting MDM2-mediated degradation of PCNA (PubMed:20733054). Regulates DA transporter (DAT) activity and protein expression via activation of RhoA (PubMed:28842414). In response to H(2)O(2) treatment phosphorylates ELAVL1, thus preventing it from binding to the PDCD4 3'UTR and rendering the PDCD4 mRNA accessible to miR-21 and leading to its degradation and loss of protein expression (PubMed:26595526). Also functions in a kinase activity-independent manner as a negative regulator of growth (By similarity). Phosphorylates in vitro FOS and MBP (PubMed:11875070, PubMed:16484222, PubMed:19166846, PubMed:20638370). During oocyte maturation, plays a key role in the microtubule organization and meiotic cell cycle progression in oocytes, fertilized eggs, and early embryos (By similarity). Interacts with ESRRA promoting its re-localization from the nucleus to the cytoplasm and then prevents its transcriptional activity (PubMed:21190936).

Cellular Location
Cytoplasm, cytoskeleton, cilium basal body. Cell junction, tight junction. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole Cytoplasmic vesicle, autophagosome. Golgi apparatus. Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle {ECO:0000250|UniProtKB:Q80Y86}. Note=Co-localizes to the cytoplasm only in presence of ESRRA (PubMed:21190936) Translocates to the nucleus upon activation (PubMed:20638370). At prometaphase I, metaphase I (MI), anaphase I, telophase I, and metaphase II (MII) stages, is stably detected at the spindle (By similarity). {ECO:0000250|UniProtKB:Q80Y86, ECO:0000269|PubMed:20638370, ECO:0000269|PubMed:21190936}

Tissue Location
Widely expressed with a maximal expression in lung and kidney.

MAPK15 Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

MAPK15 Antibody (N-term) Blocking peptide - Images

MAPK15 Antibody (N-term) Blocking peptide - Background

The ERKs are a subfamily of the MAPKs that have been implicated in cell growth and differentiation. Extracellular signal-regulated kinase 8 (Erk8) is a large MAP kinase whose activity is controlled by serum and the c-Src non-receptor tyrosine kinase. ERK8 down-regulates transactivation of the glucocorticoid receptor through Hic-5 and can negatively regulate transcriptional co-activation of androgen receptor and GRalpha by Hic-5 in a kinase-independent manner, suggesting a broader role for ERK8 in the regulation of nuclear receptors beyond estrogen

receptor alpha. Erk8 is a novel effector of RET/PTC3 and, therefore, RET biological functions.

MAPK15 Antibody (N-term) Blocking peptide - References

Saelzler,M.P., J. Biol. Chem. 281 (24), 16821-16832 (2006)Iavarone,C., J. Biol. Chem. 281 (15), 10567-10576 (2006)Klevernic,I.V., Biochem. J. 394 (PT 1), 365-373 (2006)Suzuki,Y., Genome Res. 14 (9), 1711-1718 (2004)