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MAPK15 / ERK7 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS14472

Specification

MAPK15 / ERK7 Antibody - Product Information

Application	**IF, WB, IHC**
Primary Accession	Q8TD08
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**60kDa KDa**

MAPK15 / ERK7 Antibody - Additional Information

Gene ID 225689

Other Names
Mitogen-activated protein kinase 15, MAP kinase 15, MAPK 15, 2.7.11.24, Extracellular signal-regulated kinase 7, ERK-7, Extracellular signal-regulated kinase 8, ERK-8, MAPK15, ERK7, ERK8

Target/Specificity
Human MAPK15.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
MAPK15 / ERK7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MAPK15 / ERK7 Antibody - 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:22948227, PubMed:24618899, PubMed:29021280, PubMed:21847093, PubMed:20733054). 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:20638370, PubMed:19166846). 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.

Volume
50 µl

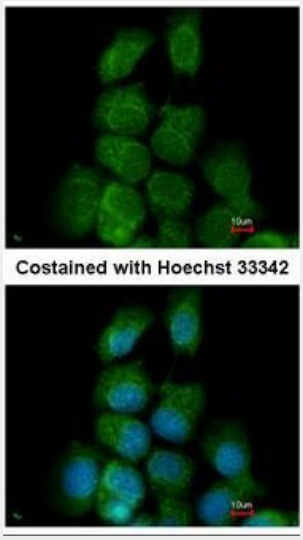
MAPK15 / ERK7 Antibody - Protocols

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

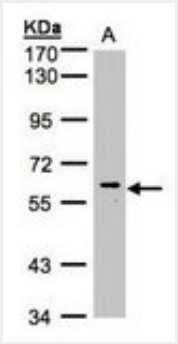
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety

- Cell Culture

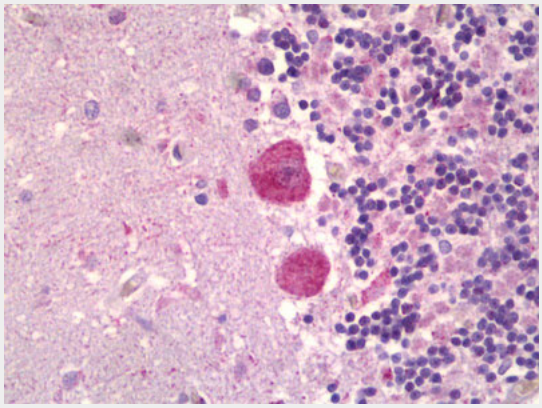
MAPK15 / ERK7 Antibody - Images



Immunofluorescence of methanol-fixed A431, using MAPK15 antibody at 1:200 dilution.



Sample. A: 30g of HeLa S3 whole cell lysate. 7.5% SDS PAGE. MAPK15 antibody diluted at 1:1000



Anti-MAPK15 antibody IHC of human brain, cerebellum.

MAPK15 / ERK7 Antibody - Background

In vitro, phosphorylates MBP.

MAPK15 / ERK7 Antibody - References

Abe M.K.,et al.J. Biol. Chem. 277:16733-16743(2002).
Iavarone C.,et al.J. Biol. Chem. 281:10567-10576(2006).
Saelzler M.P.,et al.J. Biol. Chem. 281:16821-16832(2006).
Oppermann F.S.,et al.Mol. Cell. Proteomics 8:1751-1764(2009).