

ERK 8 Polyclonal Antibody

Catalog # AP69813

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q8TD08
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	59832

Additional Information

Gene ID	225689
Other Names	MAPK15; ERK7; ERK8; Mitogen-activated protein kinase 15; MAP kinase 15; MAPK 15; Extracellular signal-regulated kinase 7; ERK-7; Extracellular signal-regulated kinase 8; ERK-8
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

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 through 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 H₂O₂ 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

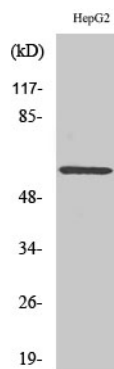
Widely expressed with a maximal expression in lung and kidney.

Background

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 through 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 H₂O₂ 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](#)).

Images

Western Blot analysis of various cells using ERK 8 Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Invent biotech, MN, USA).



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