SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Mouse Anti-Erk2 antibody

SLM-51555M

Product Name	**[KO validated anti]** Erk2
Chinese Name	丝裂原活化蛋白激酶 2/ERK2 单克隆抗体
Alias	ERK 2; ERK-2; ERT1; Extracellular Signal Regulated Kinase 2; Extracellular signal-regulated kinase 2; MAP kinase 1; MAP kinase 2; MAP kinase isoform p42; MAPK 1; MAPK 2; Mapk1; Mitogen-activated protein kinase 1; MK01_HUMAN; P38; P40; P41; p42-MAPK; P42MAPK; PRKM1; PRKM2; protein kinase, mitogen-activated, 1; protein kinase, mitogen-activated, 2; protein tyrosine kinase ERK2.
Research Area	Tumour Cell biology immunology Neurobiology Signal transduction Stem cells Apoptosis transcriptional regulatory factor Kinases and Phosphatases Cytoskeleton
Immunogen Species	Mouse
Clonality	Monoclonal
Clone NO.	D2F12
React Species	Human,Mouse,Rat(predicted:Xenopus,Bovine)
Applications	WB=1:500-2000,Flow-Cyt=1μg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	42kDa
Cellular localization	The nucleus cytoplasmic The cell membrane Extracellular matrix
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Erk2: 101-200/360
Lsotype	IgG1,k
Purification	affinity purified by Protein G
Buffer Solution	Human,Mouse,Rat(predicted:Xenopus,Bovine)1M TBS(pH7.4) with 1% BSA, Human,Mouse,Rat(predicted:Xenopus,Bovine)3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw

cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

PubMed

Product Detail

This gene encodes a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), 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 activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. One study also suggests that this protein acts as a transcriptional repressor independent of its kinase activity. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene. [provided by RefSeq, Jan 2014]

Subcellular Location:
Cytoplasm, cytoskeleton, spindle. Nucleus. Cytoplasm, cytoskeleton, centrosome. Cytoplasm. Note=Associated with the spindle duringprometaphase and metaphase. Cytoplasm, cytoskeleton, spindle. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm. Membrane, caveola. Note=Associated with the spindle during prometaphase and metaphase. PEA15-binding and phosphorylated DAPK1 promote its cytoplasmic retention. Phosphorylation at Ser- 246 and Ser-248 as well as autophosphorylation at Thr-190 promote nuclear localization

Tissue Specificity:
Widely expressed.

Post-translational modifications:
Phosphorylated upon KIT and FLT3 signaling. Dually phosphorylated on Thr-185 and Tyr-187, which activates the enzyme. Undergoes regulatory phosphorylation on additional residues such as Ser-246 and Ser-248 in the kinase insert domain (KID) These phosphorylations, which are probably mediated by more than one kinase, are important for binding of MAPK1/ERK2 to importin-7 (IPO7) and its nuclear translocation. In addition, autophosphorylation of Thr-190 was shown to affect the subcellular localization of MAPK1/ERK2 as well. Ligand-activated ALK induces tyrosine phosphorylation. Dephosphorylated by PTPRJ at Tyr-187. Phosphorylation on Ser-29 by SGK1 results in its activation by enhancing its

interaction with MAP2K1/MEK1 and MAP2K2/MEK2. DUSP3 and DUSP6 dephosphorylate specifically MAPK1/ERK2 and MAPK3/ERK1 whereas DUSP9 dephosphorylates a broader range of MAPKs. Dephosphorylated by DUSP1 at Thr-185 and Tyr-187.
ISGylated.

Similarity:
Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.

SWISS:
P28482

Gene ID:
5594

Database links:

Entrez Gene: 5594 Human

Entrez Gene: 26413 Mouse

Entrez Gene: 116590 Rat

Omim: 176948 Human

SwissProt: P28482 Human

SwissProt: P63085 Mouse

SwissProt: P63086 Rat

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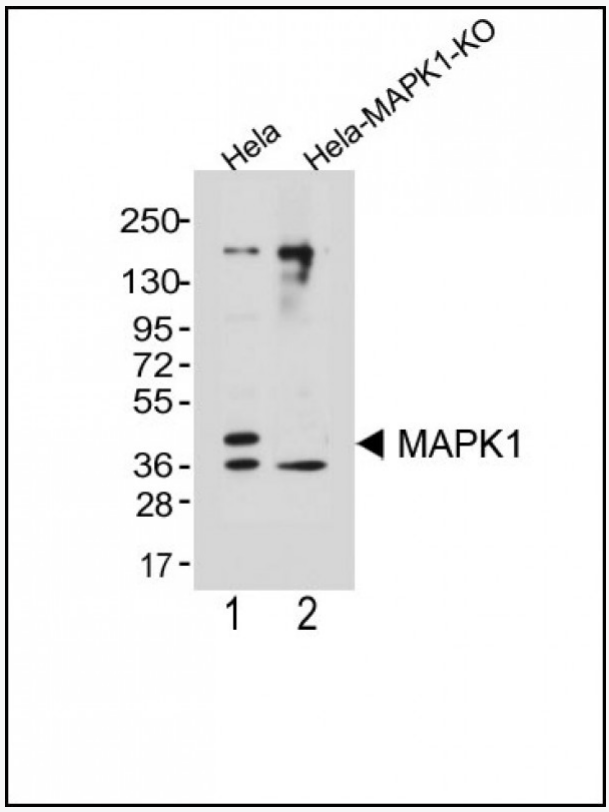
Product Picture



Sample:

Lane 1: Hela cell lysates

Lane 2: Hela-MAPK1 KO cell lysates

Primary: Anti-Erk2 (SLM-51555M) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD

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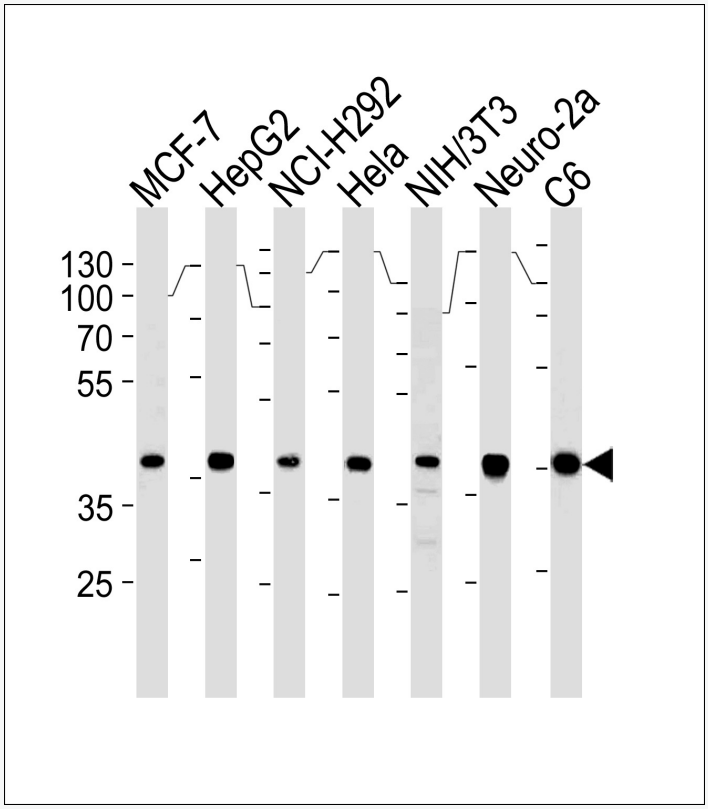

Sample:

Lane 1: MCF-7 cell lysates

Lane 2: HepG2 cell lysates

Lane 3: NCI-H292 cell lysates

Lane 4: Hela cell lysates

Lane 5: NIH/3T3 cell lysates

Lane 6: Neuro-2a cell lysates

Lane 7: C6 cell lysates

Primary: Anti-Erk2 (SLM-51555M) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

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