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Rabbit Anti-phospho-Erk1 (Thr202 + Tyr204) antibody

SL1645R

Product Name:	phospho-Erk1 (Thr202 + Tyr204)
Chinese Name:	磷酸化丝裂原活化蛋白激酶1抗体
Alias:	Erk1 (pT202/pY204); ERK/MAPK(phospho T202/Y204); ERK1 (phospho T202); p-ERK1 (phospho T202); p44/42 MAP Kinase(Phospho-Thr202); ERK; ERK-1; ERT 2; ERT2; Extracellular Signal Regulated Kinase 1; Extracellular signal related kinase 1; Extracellular signal-regulated kinase 1; HGNC6877; HS44KDAP; HUMKER1A; Insulin Stimulated MAP2 Kinase; Insulin-stimulated MAP2 kinase; MAP kinase 1; MAP kinase 3; MAP Kinase; MAP kinase isoform p44; MAPK 1; MAPK 3; MAPK; MAPK1; Mapk3; MGC20180; Microtubule Associated Protein 2 Kinase; Microtubule-associated protein 2 kinase; Mitogen Activated Protein Kinase 3; Mitogen-activated protein kinase 1; Mitogen-activated protein kinase 3; MK03_HUMAN; OTTHUMP00000174538; OTTHUMP00000174541; p44 ERK1; p44 MAPK; p44-ERK1; p44-MAPK; P44ERK1; P44MAPK; PRKM 3; PRKM3; Protein Kinase Mitogen Activated 3.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Horse,Rabbit,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	43kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from rat ERK1 around the phosphorylation site of Thr201/204:FL(p-T)E(p-Y)VA

Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act in a signaling cascade that regulates various cellular processes such as proliferation, differentiation, and cell cycle progression in response to a variety of extracellular signals. This kinase is activated by upstream kinases, resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Alternatively spliced transcript variants encoding different protein isoforms have been described. **Function:** Serine/threonine kinase which acts as an essentialcomponent of the MAP kinase signal transduction pathway. MAPK1/ERK2and MAPK3/ERK1 are the 2 MAPKs which play an important role in theMAPK/ERK cascade. They participate also in a signaling cascadeinitiated by activated KIT and KITLG/SCF. Depending on the cellularcontext, the MAPK/ERK cascade mediates diverse biological functionssuch as cell growth, adhesion, survival and differentiation throughthe regulation of transcription, translation, cytoskeletalrearrangements. The MAPK/ERK cascade plays also a role ininitiation and regulation of meiosis, mitosis, and postmitoticfunctions in differentiated cells by phosphorylating a number oftranscription factors. About 160 substrates have already beendiscovered for ERKs. Many of these substrates are localized in thenucleus, and seem to participate in the regulation of transcriptionupon stimulation. However, other substrates are found in thecytosol as well as in other cellular organelles, and those areresponsible for processes such as translation, mitosis andapoptosis. Moreover, the MAPK/ERK cascade is also involved in theregulation of the endosomal dynamics, including lysosome processingand endosome cycling through the perinuclear recycling compartment(PNRC); as well as in the fragmentation of the Golgi apparatusduring mitosis. The substrates include transcription factors (suchas ATF2, BCL6, ELK1, ERF, FOS, HSF4 or SPZ1), cytoskeletal elements(such as CANX, CTTN, GJA1, MAP2, MAPT, PXN, SORBS3 or STMN1),regulators of apoptosis (such as BAD, BTG2, CASP9, DAPK1, IER3,MCL1 or PPARG), regulators of translation (such as EIF4EBP1) and avariety of other signaling-related molecules (like ARHGEF2, FRS2 orGRB10). Protein kinases (such as RAF1, RPS6KA1/RSK1, RPS6KA3/RSK2,RPS6KA2/RSK3, RPS6KA6/RSK4, SYK, MKNK1/MNK1, MKNK2/MNK2,RPS6KA5/MSK1, RPS6KA4/MSK2, MAPKAPK3 or MAPKAPK5) and phosphatases(such as DUSP1, DUSP4, DUSP6 or DUSP16) are other substrates whichenable the propagation the MAPK/ERK signal to additional cytosolicand nuclear targets, thereby extending the specificity of thecascade. **Subunit:**

Binds both upstream activators and downstream substratesin multimolecular complexes. Found in a complex with at least BRAF,HRAS1, MAP2K1/MEK1, MAPK3 and RGS14. Interacts with ADAM15, ARRB2,CANX, DAPK1 (via death domain), HSF4, IER3, MAP2K1/MEK1, MORG1,NISCH, PEA15, SGK1 and MKNK2 (By similarity). MKNK2 isoform 1binding prevents from dephosphorylation and inactivation. Interactswith TPR (By similarity).

Subcellular Location:
Cytoplasm (By similarity). Nucleus.Note=Autophosphorylation at Thr-207 promotes nuclear localization(By similarity). PEA15-binding redirects the biological outcome ofMAPK3 kinase-signaling by sequestering MAPK3 into the cytoplasm (Bysimilarity). Isoform 2: Nucleus.

Tissue Specificity:
Highest levels within the nervous system,expressed in different tissues, mostly in intestine, placenta andlung.

Post-translational modifications:
Phosphorylated upon FLT3 and KIT signaling. Ligand-activatedALK induces tyrosine phosphorylation (By similarity).Dephosphorylated by PTPRJ at Tyr-205 (By similarity). Duallyphosphorylated on Thr-203 and Tyr-205, which activates the enzyme.

Similarity:
Belongs to the protein kinase superfamily. CMGCSer/Thr protein kinase family. MAP kinase subfamily.
Contains 1 protein kinase domain.

SWISS:
P27361

Gene ID:
5595

Database links:

Entrez Gene: 5594Human

Entrez Gene: 5595Human

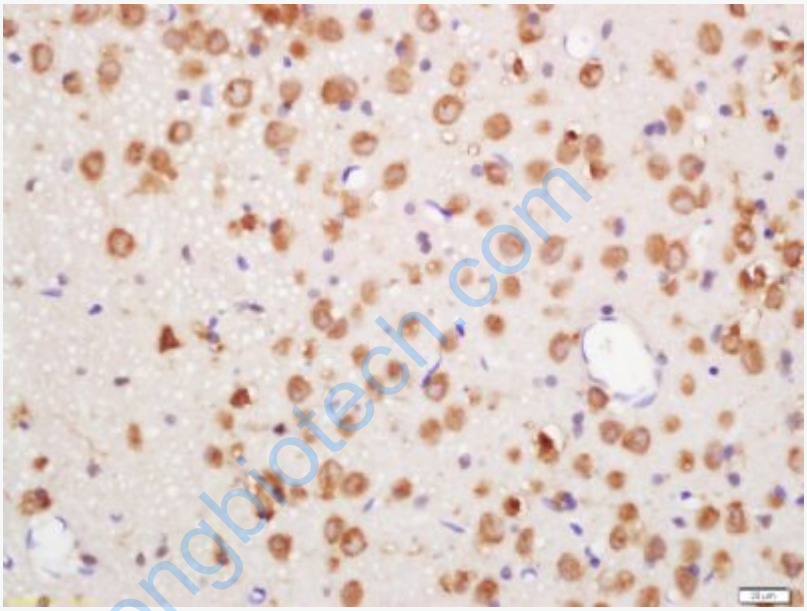
Entrez Gene: 116590Rat

Entrez Gene: 50689Rat

SwissProt: P27361Human

SwissProt: P28482Human

SwissProt: P21708Rat

	SwissProt: P63086Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Picture:	 Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-phospho-Erk1(Thr202+Tyr204) Polyclonal Antibody, Unconjugated(SL1645R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining