

Rabbit ERK5 Polyclonal Antibody | anti-ERK5 antibody

Phospho-ERK5 (Thr219+Tyr221) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329714	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Xenopus (85%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

ERK5; Polyclonal Antibody; Phospho-ERK5 (Thr219+Tyr221) Antibody; Big MAP kinase 1; BMK 1; BMK 1 kinase; BMK-1; BMK1; BMK1 Kinase; EC 2.7.11.24; ERK 4; ERK 5; ERK-5; ERK4; Extracellular signal regulated kinase 5; Extracellular signal-regulated kinase 5; MAP kinase 7; MAPK 7; MAPK7; Mitogen activated protein kinase 7; Mitogen-activated protein kinase 7; MK07_HUMAN; OTTHUMP00000065906; OTTHUMP00000065907; PRKM 7; PRKM7; PROTEIN KINASE; MITOGEN-ACTIVATED; 7; anti-ERK5 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Xenopus (85%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-ERK5 (Thr219+Tyr221) Antibody detects endogenous levels of ERK5 only when phosphorylated at Thr219+Tyr221. Tissue Specificity: Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-ERK5 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human ERK5 around the phosphorylation site of Thr219+Tyr221.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Dually phosphorylated on Thr-219 and Tyr-221, which activates the enzyme (By similarity). Autophosphorylated in vitro on threonine and tyrosine residues when the C-terminal part of the kinase, which could have a regulatory role, is absent.
Subunit Structure	Interacts with MAP2K5. Forms oligomers (By similarity). Interacts with MEF2A, MEF2C and MEF2D; the interaction phosphorylates the MEF2s and enhances transcriptional activity of MEF2A, MEF2C but not MEF2D (By similarity). Interacts with SGK1. Preferentially interacts with PML isoform PML-4 but shows interaction also with its other isoforms: isoform PML-1, isoform PML-2, isoform PML-3 and isoform PML-6. Interacts (via N-terminal half) with HSP90AB1-CDC37 chaperone complex in resting cells; the interaction is MAP2K5-independent and prevents MAPK7 from ubiquitination and proteasomal degradation.
Similarity	The second proline-rich region may interact with actin targeting the kinase to a specific location in the cell. The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases. Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.

Subcellular Location	Cytoplasm. Nucleus. Nucleus>PML body. Note: Translocates to the nucleus upon activation.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
At 1/100 staining Mouse ovary tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)
At 1/100 staining Human lung cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
Staining Human lung cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of ERK5 (Phospho-Thr219+Tyr221) using HuvEc whole cell lysates.-/+ means absence or presence of N peptide(1/4 non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-ERK5 antibody	Plays a role in various cellular processes such as proliferation, differentiation and cell survival. The upstream activator of MAPK7 is the MAPK kinase MAP2K5. Upon activation, it translocates to the nucleus and phosphorylates various downstream targets including MEF2C. EGF activates MAPK7 through a Ras-independent and MAP2K5-dependent pathway. May have a role in muscle cell differentiation. May be important for endothelial function and maintenance of blood vessel integrity. MAP2K5 and MAPK7 interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways. Phosphorylates SGK1 at Ser-78 and this is required for growth factor-induced cell cycle progression. Involved in the regulation of p53/TP53 by disrupting the PML-MDM2 interaction.
--	---

NCBI AND UNIPROT INFORMATION

NCBI GI #	20986497
NCBI GeneID	5598
NCBI Accession #	NP_002740.2
NCBI GenBank Nucleotide #	NM_002749.3
UniProt Accession #	Q13164; Q16634; Q59F50; Q6QLU7; Q7L4P4; Q969G1; Q96G51
Molecular Weight	88,386 Da
NCBI Official Full Name	mitogen-activated protein kinase 7 isoform 1

NCBI Official Synonym Full Names	mitogen-activated protein kinase 7
NCBI Official Symbol	MAPK7
NCBI Official Synonym Symbols	BMK1; ERK4; ERK5; PRKM7
NCBI Protein Information	mitogen-activated protein kinase 7; BMK-1; ERK-5; MAPK 7; BMK1 kinase; MAP kinase 7; big MAP kinase 1; extracellular signal-regulated kinase 5; extracellular-signal-regulated kinase 5
UniProt Protein Name	Mitogen-activated protein kinase 7
UniProt Gene Name	MAPK7
UniProt Synonym Gene Names	BMK1; ERK5; PRKM7; MAP kinase 7; MAPK 7; BMK-1; ERK-5
UniProt Entry Name	MK07_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/erk5-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329714>