

MAPK7 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7504a**Specification**

MAPK7 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	Q13164
Other Accession	P0C865 , Q9WVS8 , A5PKJ4
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	88386
Antigen Region	776-805

MAPK7 Antibody (C-term) - Additional Information**Gene ID** 5598**Other Names**

Mitogen-activated protein kinase 7, MAP kinase 7, MAPK 7, Big MAP kinase 1, BMK-1, Extracellular signal-regulated kinase 5, ERK-5, MAPK7, BMK1, ERK5, PRKM7

Target/Specificity

This MAPK7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 776-805 amino acids from the C-terminal region of human MAPK7.

Dilution

WB~~1:1000

IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

MAPK7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MAPK7 Antibody (C-term) - Protein Information**Name** MAPK7

Synonyms BMK1, ERK5, PRKM7

Function 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. As part of the MAPK/ERK signaling pathway, acts as a negative regulator of apoptosis in cardiomyocytes via interaction with STUB1/CHIP and promotion of STUB1-mediated ubiquitination and degradation of ICER-type isoforms of CREM (By similarity). 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.

Cellular Location

Cytoplasm. Nucleus. Nucleus, PML body. Note=Translocates to the nucleus upon activation

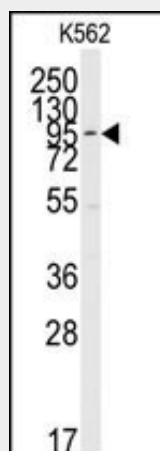
Tissue Location

Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver

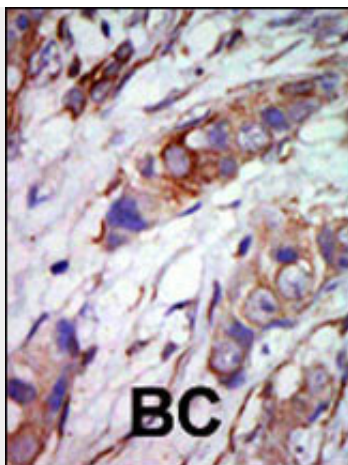
MAPK7 Antibody (C-term) - Protocols

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

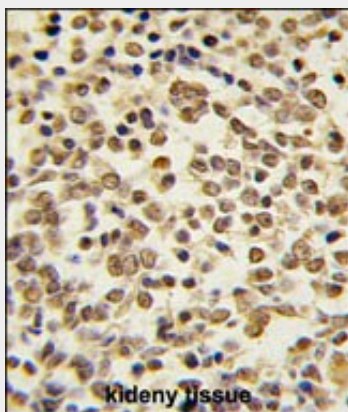
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MAPK7 Antibody (C-term) - Images

Western blot analysis of anti-ERK5 C-term Pab (Cat. #AP7504a) in K562 cell line lysates (35ug/lane). ERK5 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human kidney carcinoma tissue reacted with ERK5 Antibody (C-term) (Cat.#AP7504a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

MAPK7 Antibody (C-term) - Background

MEK5 and ERK5, a member of the MAP kinase subfamily of the Ser/Thr protein kinases, interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways. ERK5 is activated by tyrosine and threonine phosphorylation. It is expressed in many adult tissues, abundantly in heart, placenta, lung, kidney and skeletal muscle, but is not detectable in liver. The second proline-rich region may interact with actin targeting the kinase to a specific location in the cell. ERK5 is autophosphorylated on threonine and tyrosine residues when the C-terminal part of the kinase, which could have a regulatory role, is absent.

MAPK7 Antibody (C-term) - References

Zhou, G., et al., J. Biol. Chem. 270(21):12665-12669 (1995).
Lee, J.D., et al., Biochem. Biophys. Res. Commun. 213(2):715-724 (1995).