

Product Name: KD-Validated ERK1 Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA01509**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 43.1kDa

Antigen Information

Gene Name	MAPK3 MAPK3; Mitogen-Activated Protein Kinase 3; ERK1; PRKM3; Extracellular Signal-Regulated Kinase 1; Microtubule-Associated Protein 2 Kinase; Insulin-Stimulated MAP2 Kinase; EC 2.7.11.24; P44-ERK1; P44-MAPK; P44ERK1; P44MAPK; ERK-1; ERT2; Extracellular Signal-Related Kinase 1; MAP Kinase Isoform P44; MAP Kinase 3; EC 2.7.11; HS44KDAP; HUMKER1A; P44mapk; P44erk1; MAPK 1; MAPK
Alternative Names	
Gene ID	5595.0
SwissProt ID	P27361
Immunogen	A synthesized peptide derived from human ERK1

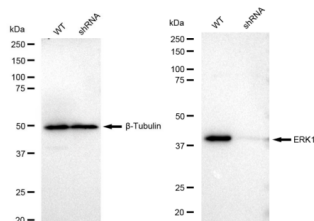
Background

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. [provided by RefSeq, Jul 2008]

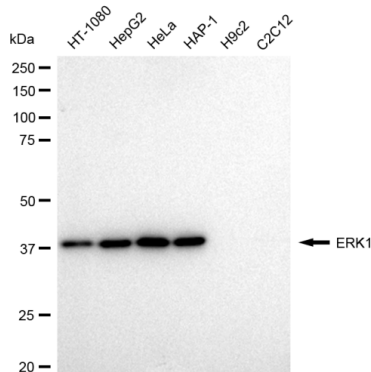
Research Area

Neuroscience, Signal Transduction, Stem Cells

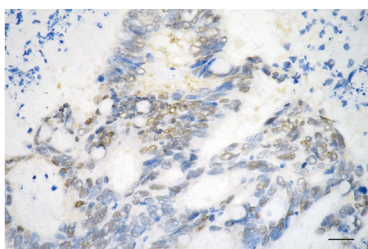
Image Data



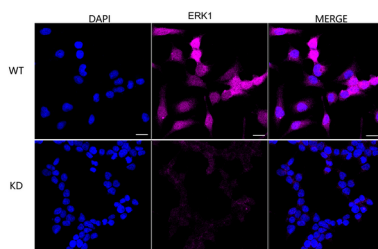
Western blotting analysis using ERK1 antibody (KVA01509). ERK1 expression in wild type (WT) and ERK1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with ERK1 antibody (KVA01509, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



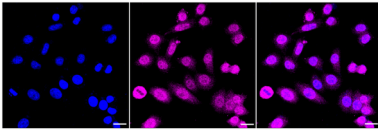
Western blotting analysis using ERK1 antibody (KVA01509). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with ERK1 antibody (KVA01509, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



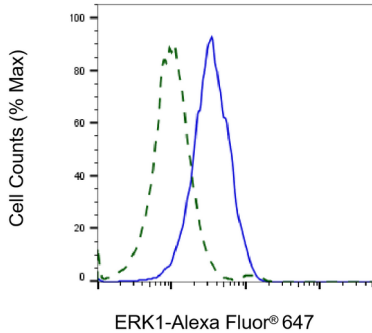
Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using ERK1 antibody (KVA01509, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



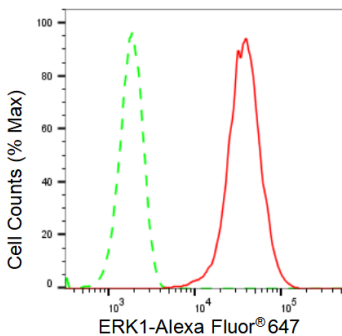
Immunocytochemical staining of HeLa cells using ERK1 antibody (KVA01509, 1:1,000). Top panel: wild-type (WT); Bottom panel: ERK1 shRNA knockdown (KD). Nuclei were stained blue with DAPI; ERK1 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm. Permeabilization: Triton.



Immunocytochemical staining of HepG2 cells with ERK1 antibody (KVA01509, 1:1,000). Nuclei were stained blue with DAPI; ERK1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μ m.



Validation of ERK1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with ERK1 antibody (KVA01509, 1:2,000) and analyzed using CytoFLEX.



Flow cytometric analysis of ERK1 expression in HepG2 cells using ERK1 antibody (KVA01509, 1:2,000). Green, isotype control; red, ERK1.