

**ERK 1/2 Polyclonal Antibody**

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| <b>Catalog No :</b>          | YT1625   |
| <b>Reactivity :</b>          | Human;Mouse;Rat  |
| <b>Applications :</b>        | IF;WB;IHC;ELISA;ChIP   |
| <b>Target :</b>              | ERK 1/2  |
| <b>Fields :</b>              | >>EGFR tyrosine kinase inhibitor resistance;>>Endocrine resistance;>>Platinum drug resistance;>>MAPK signaling pathway;>>ErbB signaling pathway;>>Ras signaling pathway;>>Rap1 signaling pathway;>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Chemokine signaling pathway;>>HIF-1 signaling pathway;>>FoxO signaling pathway;>>Sphingolipid signaling pathway;>>Phospholipase D signaling pathway;>>Oocyte meiosis;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>Apoptosis;>>Cellular senescence;>>Adrenergic signaling in cardiomyocytes;>>Vascular smooth muscle contraction;>>TGF-beta signaling pathway;>>Axon guidance;>>VEGF signaling pathway;>>Apelin signaling pathway;>>Osteoclast differentiation;>>Focal adhesion;>>Adherens junction;>>Gap junction;>>Signaling pathways regulating pluripotency of stem cells;>>Platelet activation;>>Neutrophil extracellular trap formation;>>Toll-like receptor signaling pathway;>>NOD-like receptor signaling pathway;>>C-type lectin recep |
| <b>Gene Name :</b>           | MAPK1/MAPK3  |
| <b>Protein Name :</b>        | Mitogen-activated protein kinase 3   |
| <b>Human Gene Id :</b>       | 5595   |
| <b>Human Swiss Prot No :</b> | P27361/P28482  |
| <b>Mouse Gene Id :</b>       | 26417/26413  |
| <b>Rat Gene Id :</b>         | 50689/116590   |
| <b>Rat Swiss Prot No :</b>   | P21708/P63086  |
| <b>Immunogen :</b>           | The antiserum was produced against synthesized peptide derived from human p44/42 MAPK. AA range:330-379  |

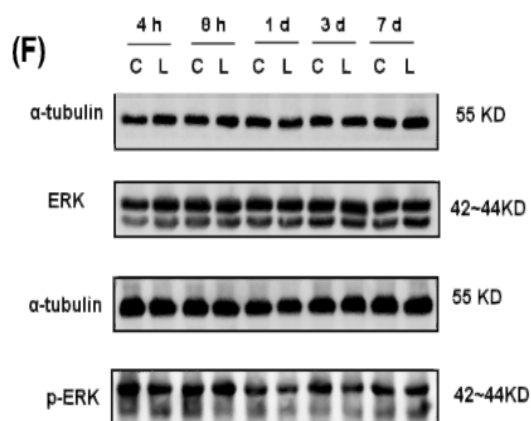
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| <b>Specificity :</b>       | ERK 1/2 Polyclonal Antibody detects endogenous levels of ERK 1/2 protein.  |
| <b>Formulation :</b>       | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.  |
| <b>Source :</b>            | Polyclonal, Rabbit,IgG   |
| <b>Dilution :</b>          | IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000. Not yet tested in other applications.  |
| <b>Purification :</b>      | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.  |
| <b>Concentration :</b>     | 1 mg/ml  |
| <b>Storage Stability :</b> | -15°C to -25°C/1 year(Do not lower than -25°C)   |
| <b>Observed Band :</b>     | 42,44kD  |
| <b>Cell Pathway :</b>      | Regulates Angiogenesis; Regulation_Microtubule; Regulation of Actin Dynamics; Stem cell pathway; T_Cell_Receptor; Insulin Receptor; Cell Growth; Toll_Like; MAPK_ERK_Growth;MAPK_G_Protein; B_Cell_Antig   |
| <b>Background :</b>        | 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],  |
| <b>Function :</b>          | catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by tyrosine phosphorylation in response to insulin and NGF.,function:Involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors such as ELK-1. Phosphorylates EIF4EBP1; required for initiation of translation. Phosphorylates microtubule-associated protein 2 (MAP2). Phosphorylates SPZ1 (By similarity). Phosphorylates heat shock factor protein 4 (HSF4).,PTM:Dually phosphorylated on Thr-202 and Tyr-204, which activates the enzyme.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinas |
| <b>Subcellular</b>         | Cytoplasm . Nucleus. Membrane, caveola . Cell junction, focal adhesion .   |

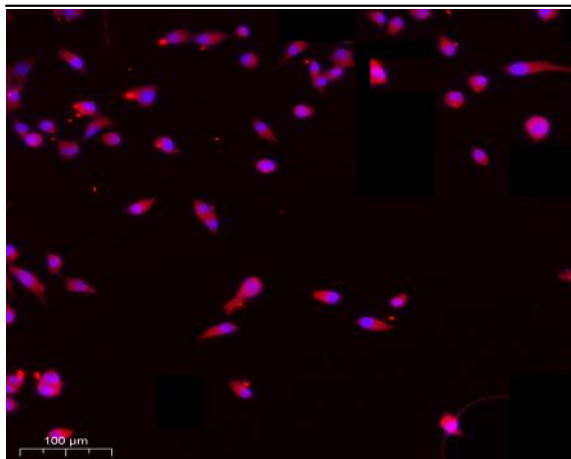
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|------------------------|--|
| <b>Location :</b>      | Autophosphorylation at Thr-207 promotes nuclear localization (PubMed:19060905). PEA15-binding redirects the biological outcome of MAPK3 kinase-signaling by sequestering MAPK3 into the cytoplasm (By similarity). . |
| <b>Expression :</b>    | Epithelium, Eye, Hepatoma, Human cervix, Lymph,  |
| <b>Tag :</b>           | orthogonal, hot, ip  |
| <b>Sort :</b>          | 1  |
| <b>No1 :</b>           | 9102S  |
| <b>No3 :</b>           | ab184699   |
| <b>No4 :</b>           | 1  |
| <b>Host :</b>          | Rabbit   |
| <b>Modifications :</b> | Unmodified   |

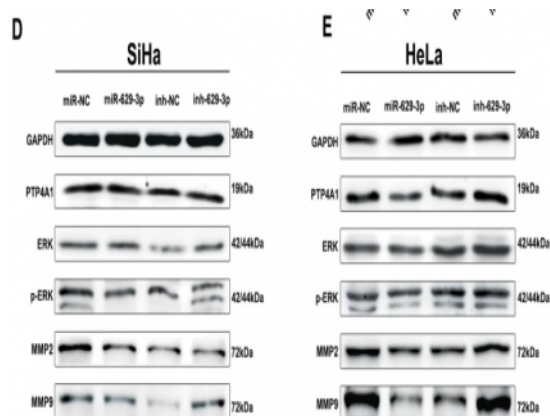
## Products Images



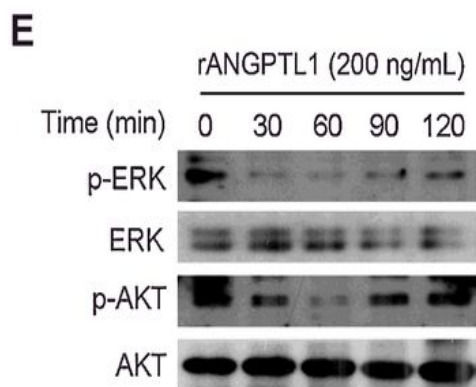
mGluR1/IP3/ERK signaling pathway regulates vestibular compensation in ON UBCs of the cerebellar flocculus. CNS Neuroscience & Therapeutics Sulin Zhang IF Rat 1:200 cerebellum



Immunofluorescence analysis of SiHa cell. 1, primary Antibody was diluted at 1:100(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - AF594 Secondary antibody(catalog No: RS3611) was diluted at 1:500(room temperature, 50min).

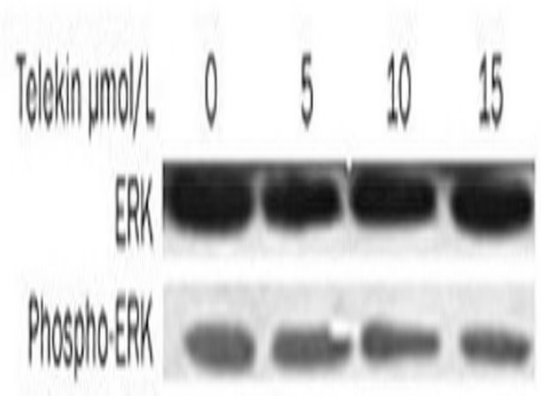


Li, X., Ma, N., Zhang, Y. et al. Circular RNA circNRIP1 promotes migration and invasion in cervical cancer by sponging miR-629-3p and regulating the PTP4A1/ERK1/2 pathway. *Cell Death Dis* 11, 399 (2020).

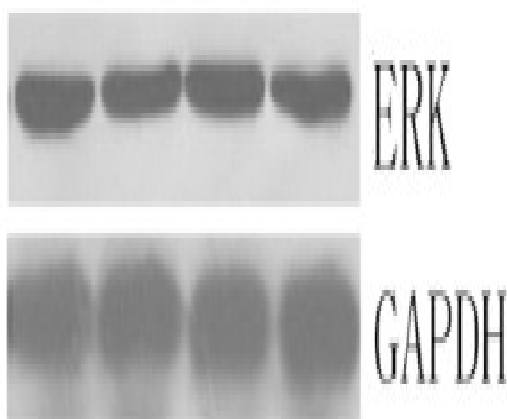


Yan, Qian, et al. "ANGPTL1 Interacts with integrin  $\alpha 1\beta 1$  to suppress HCC angiogenesis and metastasis by inhibiting JAK2/STAT3 signaling." *Cancer research* (2017): canres-0579.

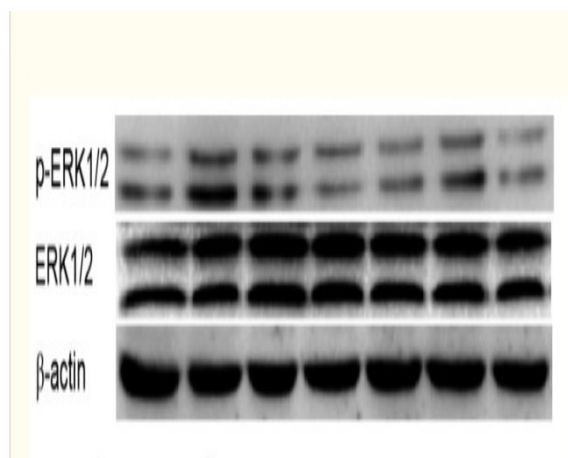
Li, Lin, et al. "Telekin suppresses human hepatocellular carcinoma cells in vitro by inducing G 2/M phase arrest via the p38 MAPK signaling pathway." *Acta Pharmacologica Sinica* 35.10 (2014): 1311.

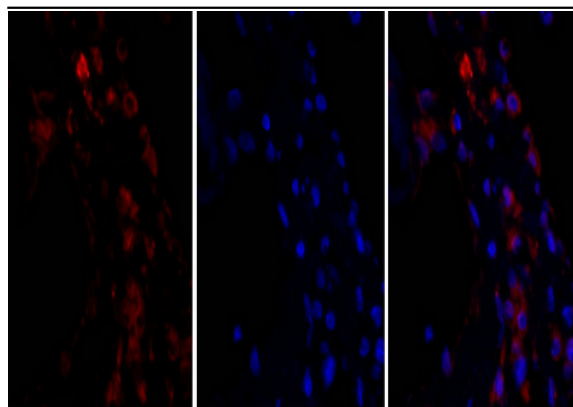


Wang, Xinzhao, et al. "Ad-p53 enhances the sensitivity of triple-negative breast cancer MDA-MB-468 cells to the EGFR inhibitor gefitinib." *Oncology reports* 33.2 (2015): 526-532.



Xu, Yini, et al. "Inhibitory effects of oxymatrine on TGF-β1-induced proliferation and abnormal differentiation in rat cardiac fibroblasts via the p38MAPK and ERK1/2 signaling pathways." *Molecular medicine reports* 16.4 (2017): 5354-5362.



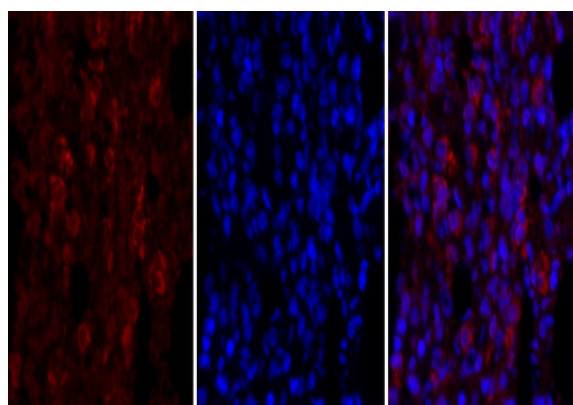


A

B

C

Immunofluorescence analysis of human-lung tissue. 1, ERK 1/2 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

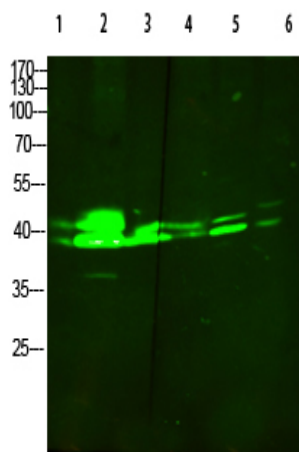


A

B

C

Immunofluorescence analysis of rat-lung tissue. 1, ERK 1/2 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

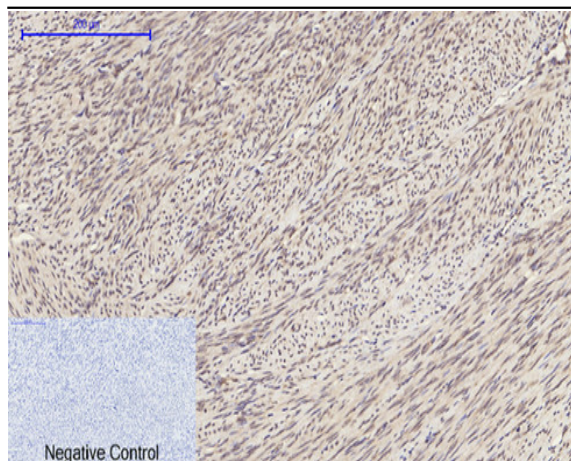


1 2 3 4 5 6

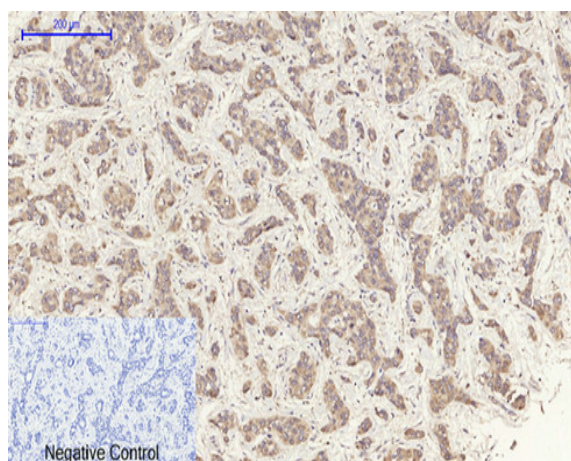
- 1 mouse-lung
- 2 mouse-brain
- 3 RAT-kidney
- 4 mouse-liver
- 5 CACO2
- 6 3T3

ERK1/2

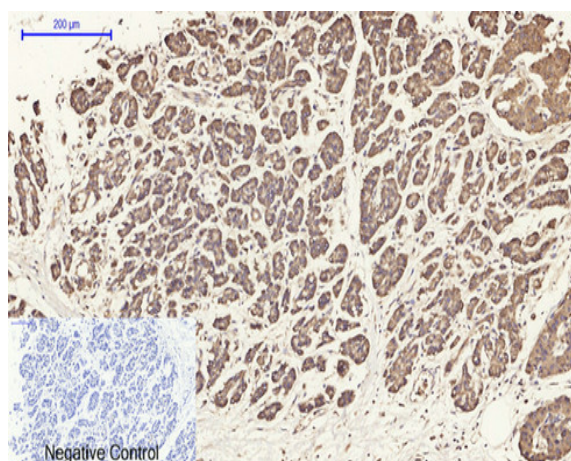
Western Blot analysis of various cells using primary antibody diluted at 1:1000 (4 °C overnight). Secondary antibody: Goat Anti-rabbit IgG IRDye 800 (diluted at 1:5000, 25 °C, 1 hour)



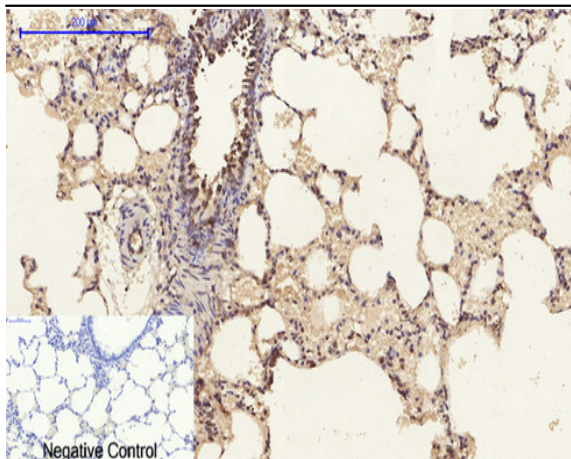
Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



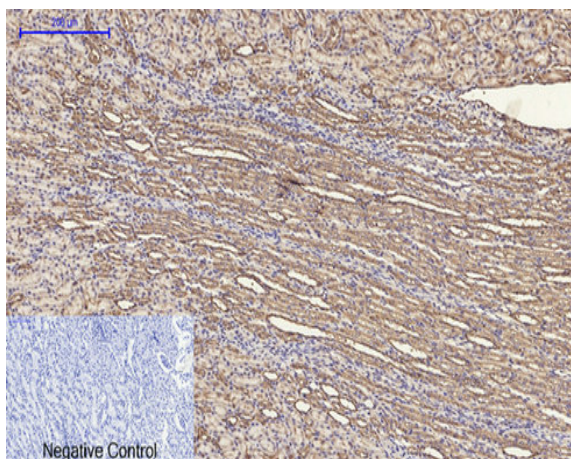
Immunohistochemical analysis of paraffin-embedded Human-liver-cancer tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



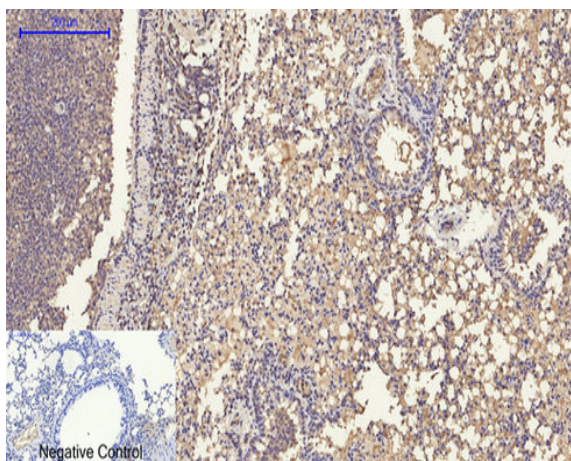
Immunohistochemical analysis of paraffin-embedded Human-stomach-cancer tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

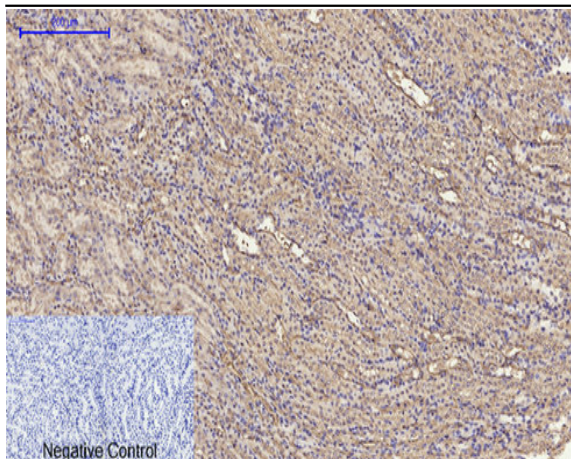


Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

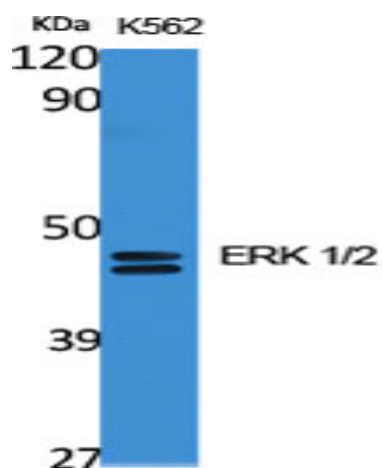


Immunohistochemical analysis of paraffin-embedded Mouse-lung tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

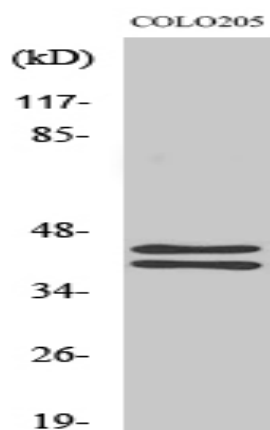




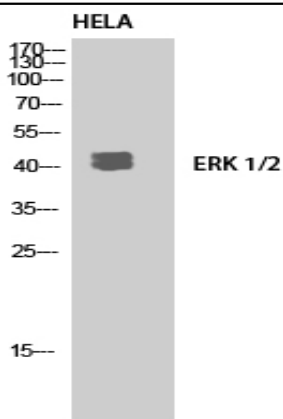
Immunohistochemical analysis of paraffin-embedded Mouse-kidney tissue. 1, ERK 1/2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



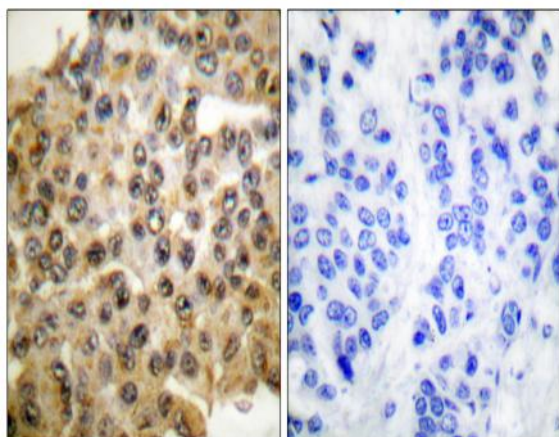
Western Blot analysis of various cells using ERK 1/2 Polyclonal Antibody diluted at 1:2000



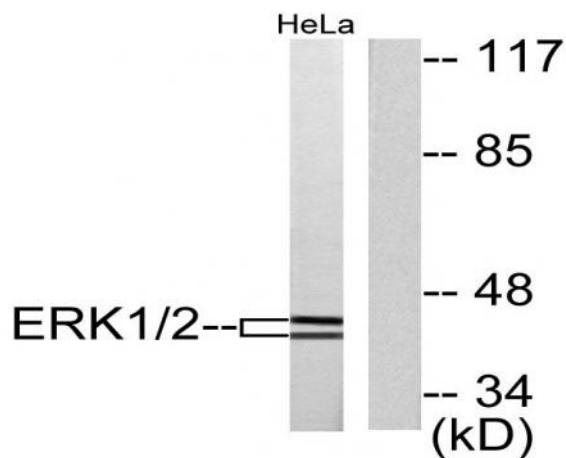
Western Blot analysis of COLO205 cells using ERK 1/2 Polyclonal Antibody diluted at 1:2000



Western Blot analysis of HELA using ERK 1/2 Polyclonal Antibody. Antibody was diluted at 1:2000



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using p44/42 MAPK Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from HeLa cells, using p44/42 MAPK Antibody. The lane on the right is blocked with the synthesized peptide.