

## Anti-ERK1/2 Antibody (6Q27)

## Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Molecular Weight:	Theoretical: 42/44 kDa. Actual: 42/44 kDa.
Clone:	6Q27
Purification:	Protein A purified

## Applications

1. Tissue/cell: A549 cell;4% Paraformaldehyde-fixed;Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Antibody incubation with (ERK1/2) monoclonal Antibody, Unconjugated (TMAB-00637) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue) was used to stain the cell nucleus.

2. Blank control: Hela.

Primary Antibody (green line): Rabbit Anti-ERK1/2 antibody (TMAB-00637)

Dilution: 1 µg/10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG.

Secondary Antibody: Goat anti-rabbit IgG-AF647

Dilution: 1 µg/test.

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Verified Activity:

3. Paraformaldehyde-fixed, paraffin embedded Mouse Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

4. Paraformaldehyde-fixed, paraffin embedded Human Cervical Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

5. Paraformaldehyde-fixed, paraffin embedded Human Colon Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

6. Paraformaldehyde-fixed, paraffin embedded Human Tonsil; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

7. Paraformaldehyde-fixed, paraffin embedded Human Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to

the SP Kit (Rabbit) and DAB staining.

8. Paraformaldehyde-fixed, paraffin embedded Human Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

9. Paraformaldehyde-fixed, paraffin embedded Human Breast; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

10. Paraformaldehyde-fixed, paraffin embedded Human Placenta; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

11. Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.

12. Paraformaldehyde-fixed, paraffin embedded Rat Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

13. Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

14. Paraformaldehyde-fixed, paraffin embedded Rat Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

15. Paraformaldehyde-fixed, paraffin embedded Rat Kidney; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

16. Paraformaldehyde-fixed, paraffin embedded Human Kidney; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

17. Paraformaldehyde-fixed, paraffin embedded Human Glioma; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

18. Paraformaldehyde-fixed, paraffin embedded Human Spleen; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

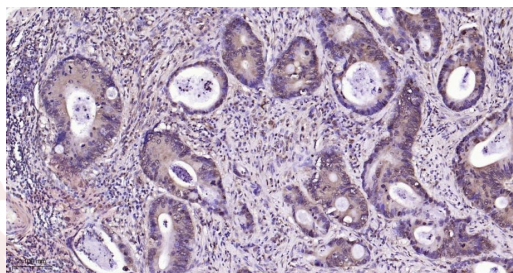
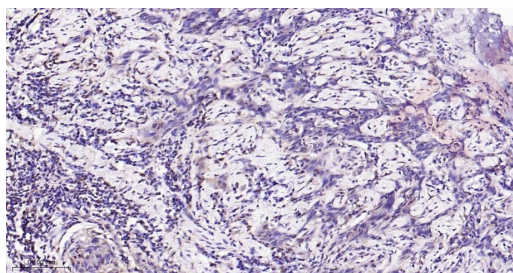
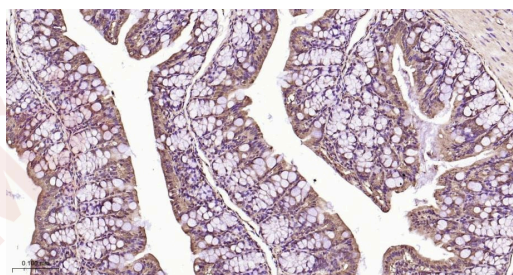
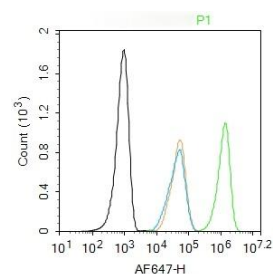
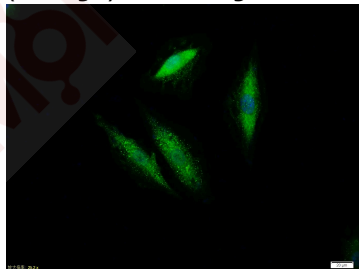
19. Paraformaldehyde-fixed, paraffin embedded Human Pancreas; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with ERK1/2 Monoclonal Antibody, Unconjugated (TMAB-00637) at 1:200 overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining.

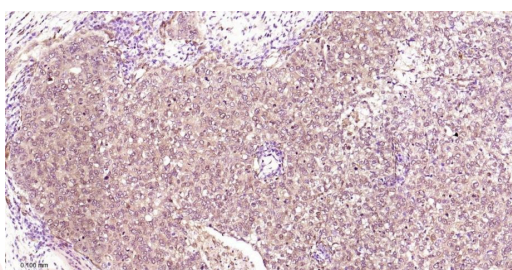
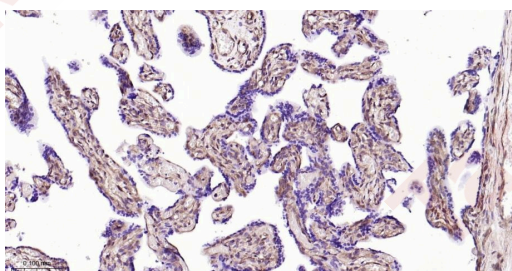
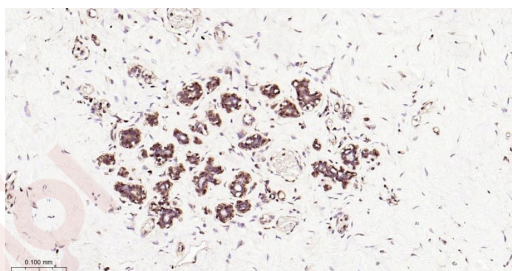
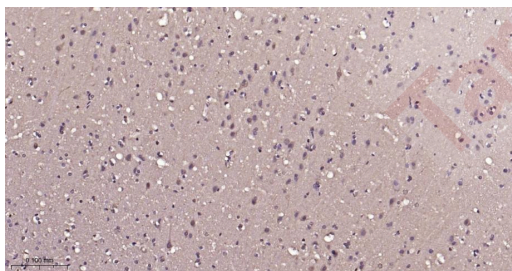
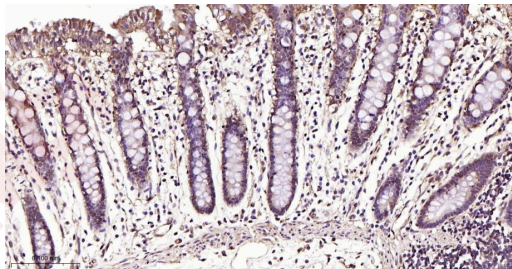
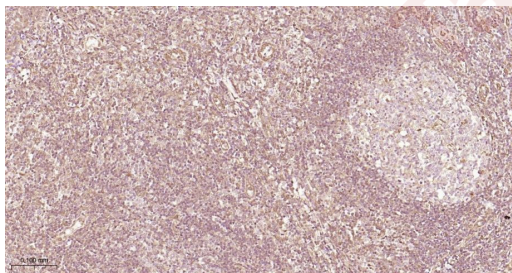
20. 25 µg total protein per Lane of various lysates probed with ERK1/2 monoclonal antibody, unconjugated (TMAB-00637) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at RT for 60 min.

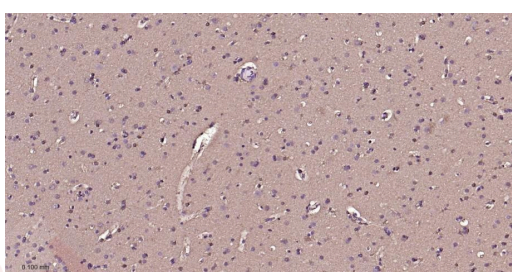
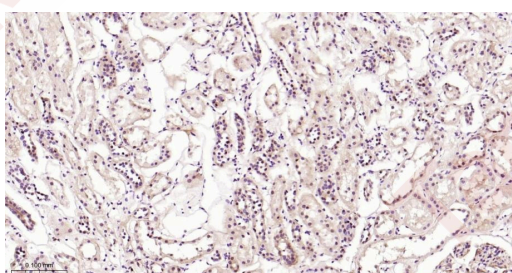
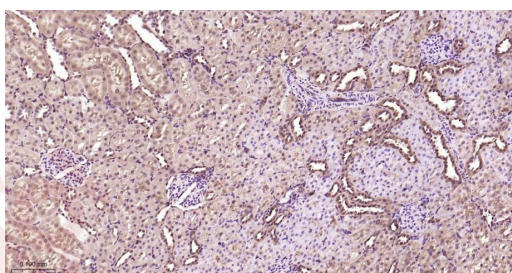
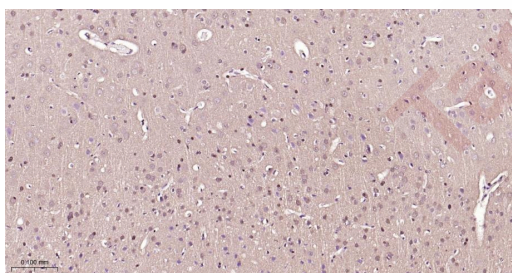
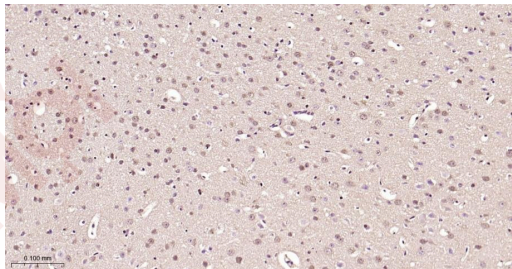
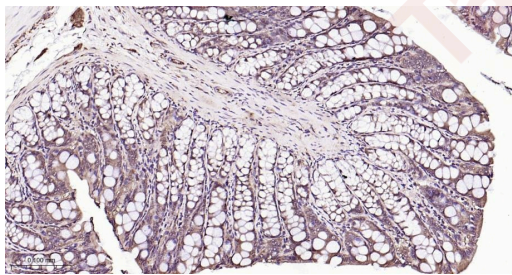
21. 4% Paraformaldehyde-fixed Hela (H) cell; Triton X-100 at RT for 20 min; Antibody

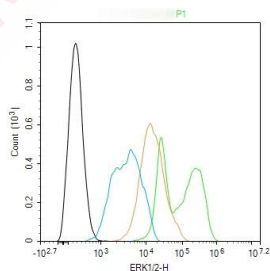
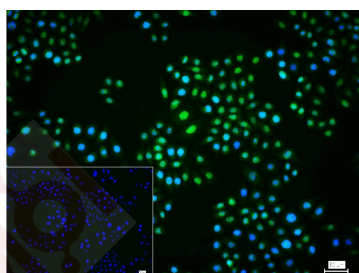
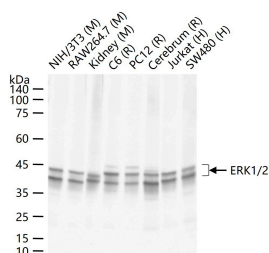
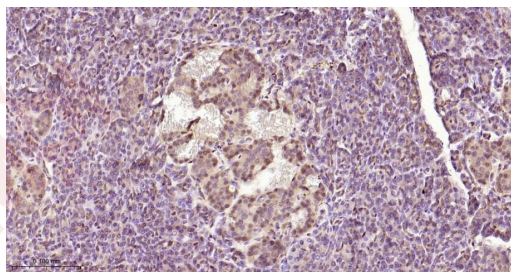
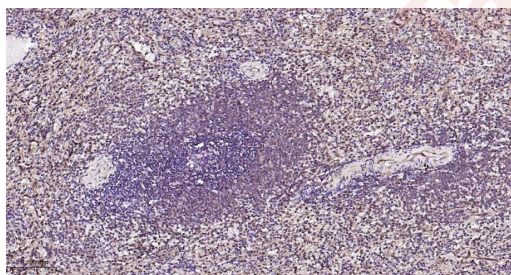
with (ERK1/2) monoclonal Antibody, unconjugated (TMAB-00637) 1:100, 90 min at 37°C; followed by conjugated Goat Anti-Rabbit IgG antibody (green) at 37°C for 90 min, DAPI (blue) was used to stain the cell nucleus. PBS instead of the primary antibody was used as the blank control.

22. The Hela (H) cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C, the cells then were incubated in 5% BSA to block non-specific protein-protein interactions (30 min at room temperature). Primary Antibody (green): Rabbit Anti-ERK1/2 antibody (TMAB-00637): 1  $\mu\text{g}/10^6$  cells; Secondary Antibody (white blue): Goat anti-Rabbit IgG-BF488: 1  $\mu\text{g}/\text{test}$ . Isotype Control (orange): Rabbit IgG. Blank control (black): PBS.









Application: FCM, ICC/IF, IHC-Fr, IHC-P, WB

Recommended FCM=1 µg/Test; ICC/IF=1:100-500; IF=1:200-800; IHC-Fr=1:200-800; IHC-P=1:200-800; WB=1:1000-5000

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen:	KLH conjugated synthetic peptide: human ERK1/2
Antigen Species:	Human
Gene ID:	5594
Uniprot ID:	P27361
Synonyms:	ERK 1/2;MAPK 1;p41;MAP kinase isoform p42;ERK-2;PRKM 1;ERT1;MAP kinase 2;Extracellular signal regulated kinase 1;Protein kinase mitogen activated 1;HUMKER1A;MAPK3;MK03;Protein kinase mitogen activated 2;p42 MAPK;ERT2;PRKM 3;Mitogen activated protein kinase 3;MK01; Extracellular signal regulated kinase 2;p40;Protein tyrosine kinase ERK 2;p38;Insulin stimulated MAP2 kinase;MAPK 3;PRKM2;MAP kinase isoform p44;MAP kinase 1;p44 ERK1;MGC20180; MAPK1;PRKM 2;Extracellular signal-regulated kinase 2;Mitogen activated protein kinase 2;ERK 1;Protein kinase mitogen activated 3;MAPK 2;MAPK2;PRKM1;Mitogen activated protein kinase 1;p41mapk;p42-MAPK;p42MAPK;PRKM3;ERK 2;p44 MAPK;p44ERK1;HS44KDAP;p44MAPK;ERK1; Microtubule associated protein 2 kinase;ERK2
Biology Area:	Tangles & Tau,MAPK Pathway,Cytoplasmic

### Research Background

The protein encoded by this gene is a member of the MAPkinase 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].

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