# ERK1/ERK2 Polyclonal Antibody

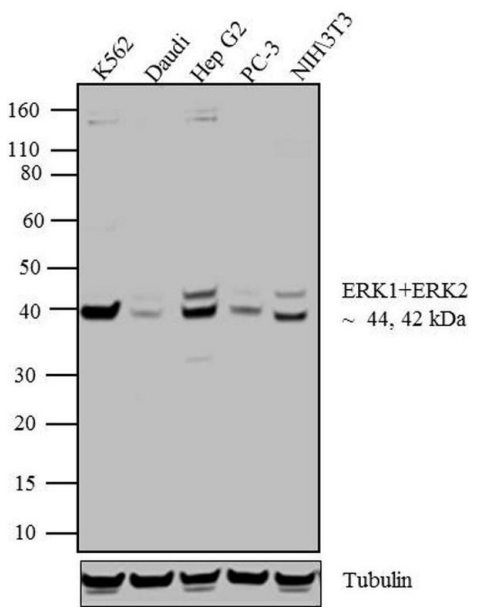
| Product Details | |
|---|---|
| Size | 100 µL |
| Species Reactivity | Bovine, Human, Mouse, Rat |
| Published Species | Dog, Rat, Human, Mouse |
| Host/Isotype | Rabbit / IgG |
| Class | Polyclonal |
| Type | Antibody |
| Conjugate | Unconjugated |
| Immunogen | The antibody was produced using a synthetic peptide derived from amino acids 317-339 within the C-terminal half of the human ERK1 protein; the sequence is conserved in human and rat |
| Form | Liquid |
| Purification | Antigen affinity chromatography |
| Storage buffer | Dulbecco's PBS, pH 7.3, with 1mg/mL BSA |
| Contains | 0.05% sodium azide |
| Storage conditions | -20°C |
| RRID | AB_2533710 |

| Applications | Tested Dilution | Publications |
|---|---|---|
| Western Blot (WB) | 1:1,000 | 26 Publications |
| Immunohistochemistry (Paraffin) (IHC (P)) | 1:10-1:100 | - |
| Immunocytochemistry (ICC/IF) | 1 µg/mL | - |
| Immunoprecipitation (IP) | - | 1 Publication |
| Miscellaneous PubMed (Misc) | - | 1 Publication |

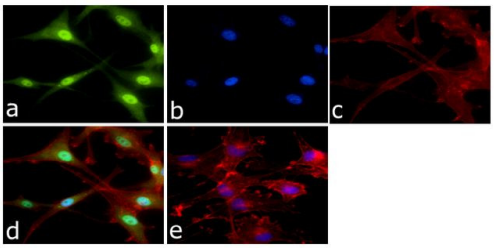
### Product Specific Information

For western blotting applications, we recommend using the antibody at a 1:1,000 starting dilution. Positive controls used in western blotting were human epidermoid carcinoma A431, mouse NIH3T3, and rat pheochromocytoma (PC12) cells.

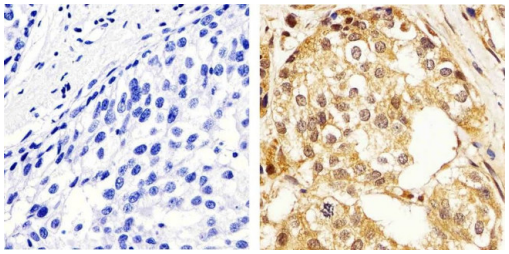
## Product Images For ERK1/ERK2 Polyclonal Antibody




**ERK1/ERK2 Antibody (44-654G) in WB**
Western blot analysis of ERK1 + ERK2 was performed by loading 20 µg of K562 (lane1), Daudi (lane2), Hep G2 (lane3), PC-3 (lane4) and NIH\u0003T3 (lane5) cell lysate using Novex® NuPAGE® 4-12 % Bis-Tris gel (Product # NP0322BOX), XCell SureLock™ Electrophoresis System (Product # EI0002), Novex® Sharp Pre-Stained Protein Standard (LC5800), and iBlot® Dry Blotting System (IB21001). Proteins were transferred to a nitrocellulose membrane and blocked with 5 % skim milk for 1 hour at room temperature. ERK1 + ERK2 was detected at ~44 and 42 kDa using ERK1 + ERK2 Rabbit Polyclonal Antibody (Product # 44-654G) at 1:1000 dilution in 5 % skim milk at 4°C overnight on a rocking platform. Goat Anti-Rabbit IgG - HRP Secondary Antibody (G21234) at 1: 5000 dilution was used and chemiluminescent detection was performed using Pierce™ ECL Western Blotting Substrate (Product # 32106).




**ERK1/ERK2 Antibody (44-654G) in ICC/IF**
Immunofluorescent analysis of ERK1 + ERK2 Antibody was done on 70% confluent log phase U87-MG cells. The cells were fixed with 4% paraformaldehyde for 15 minutes, permeabilized with 0.25% Triton™ X-100 for 10 minutes, and blocked with 5% BSA for 1 hour at room temperature. The cells were labeled with ERK1 + ERK2 Antibody (Product # 44-654G) at 1:250 dilution in 1% BSA and incubated for 3 hours at room temperature and then labeled with Alexa Fluor 488 Goat Anti-Rabbit IgG Secondary Antibody (Product # A-11008) at a dilution of 1:400 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Alexa Fluor 594 Phalloidin (Product # A12381). Panel d is a merged image showing cytoplasmic and nuclear localization. Panel e is a no primary antibody control. The images were captured at 40X magnification.



**ERK1/ERK2 Antibody (44-654G) in IHC (P)**
Immunohistochemistry analysis of ERK1/2 (pan) showing staining in the cytoplasm and nucleus of paraffin-embedded human breast carcinoma tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a ERK1/2 (pan) polyclonal antibody (Product # 44-654G) diluted in 3% BSA-PBS at a dilution of 1:100 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

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## 28 References

### Western Blot (26)

**PloS one**

#### Using the Culex pipiens sperm proteome to identify elements essential for mosquito reproduction.

"Published figure using ERK1/ERK2 polyclonal antibody (Product # 44-654G) in Western Blot"

Authors: Thaler CD,Carstens K,Martinez G,Stephens K,Cardullo RA

**Year**
2023

**International journal of molecular sciences**

#### Changes of RAS Pathway Phosphorylation in Lymphoblastoid Cell Lines from Noonan Syndrome Patients Carrying Hypomorphic Variants in Two NS Genes.

"44-654G was used in Western Blotting to suggest that the presence of one subclinical variant can activate the RAS pathway below the pathological threshold, which can instead be exceeded by the additive effect due to the co-presence of two subclinical variants causing NS, supporting our digenic inheritance hypothesis."

Authors: Tritto V,Capitanio D,Gelfi C,Riva P

**Year**
2023

**Species**
Human

**Dilution**
1:1000

View more WB references on thermofisher.com

### Immunoprecipitation (1)

**Blood**

#### Alternative modes of GM-CSF receptor activation revealed using activated mutants of the common beta-subunit.

Authors: Perugini M,Brown AL,Salerno DG,Booker GW,Stojkoski C,Hercus TR,Lopez AF,Hibbs ML,Gonda TJ,D'Andrea RJ

**Year**
2010

**Species**
Mouse

### Miscellaneous PubMed (1)

**Oncotarget**

#### Effects of a novel Nodal-targeting monoclonal antibody in melanoma.

"44-654G was used in western blot to assess the use of 3D1 mAb for treating Nodal expressing cancers."

Authors: Strizzi L,Sandomenico A,Margaryan NV,Focà A,Sanguigno L,Bodenstine TM,Chandler GS,Reed DW,Gilgur A,Seftor EA,Seftor RE,Khalkhali-Ellis Z,Leonardi A,Ruvo M,Hendrix MJ

**Year**
2015

**Species**
Human

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