

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse/Rat                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human, mouse, and rat ERK2. Also recognizes ERK1 in some cell types at much lower affinity. |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                 |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                           |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human ERK2<br>Met1-Ser360<br>Accession # P28482                 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                     |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                        |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                     |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Knockout Validated</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

ERK1 and ERK2 (also known as MAPK3 and MAPK1) are 44 and 42 kDa Ser/Thr kinases, respectively. They are part of the Ras-Raf-ERK signal transduction cascade often found downstream of growth factor receptor activation. ERK1 and ERK2 were initially isolated and cloned as kinases activated in response to insulin and NGF. They are expressed in most, if not all, mammalian tissues. Dual threonine and tyrosine phosphorylation activate both ERKs, at Thr202/Tyr204 for human ERK1 and Thr185/Tyr187 for human ERK2.

ERK5, also known as Big Mitogen-activated Protein Kinase 1 (BMK1) and MAPK7, is activated by several mechanisms, including receptor tyrosine kinases, G protein-coupled receptors, and osmotic stress. Like ERK1 and ERK2, ERK5 contains the conserved Thr-Glu-Tyr activation motif in its activation loop. Unlike these ERKs, however, ERK5 contains a unique C-terminal domain that regulates its activation and nuclear translocation.

#### PRODUCT SPECIFIC NOTICES

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