

**ERK1, Active recombinant protein**  
**ERK, Mitogen-activated protein kinase 3**  
**Catalog # PBV11316r****Specification**

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**ERK1, Active recombinant protein - Product info**

Primary Accession	<a href="#">P27361</a>
Concentration	<b>0.1</b>
Calculated MW	<b>45.0 kDa KDa</b>

**ERK1, Active recombinant protein - Additional Info**

Gene ID	<b>5595</b>
Gene Symbol	<b>ERK1</b>

**Other Names**

ERK, Mitogen-activated protein kinase 3 , Extracellular signal-regulated kinase 7, Extracellular signal-regulated kinase 8

Source	<b>Baculovirus (Sf9 insect cells)</b>
Assay&Purity	<b>SDS-PAGE; ≥90%</b>
Assay2&Purity2	<b>HPLC;</b>
Recombinant	<b>Yes</b>
<b>Format</b>	
Liquid	

**Storage**

-80°C; Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).

**ERK1, Active recombinant protein - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**ERK1, Active recombinant protein - Images****ERK1, Active recombinant protein - Background**

ERK1 is a protein serine/threonine kinase that is a member of the extracellular signal-regulated kinases (ERKs), which are activated in response to numerous growth factors and cytokines. Activation of ERK1 requires both tyrosine and threonine phosphorylation that is mediated by MEK.

ERK1 is ubiquitously distributed in tissues with the highest expression in heart, brain and spinal cord. In vitro studies indicate that ERK1 phosphorylate both nuclear and cytoplasmic proteins. Activated ERK1 translocates into the nucleus where it phosphorylates various transcription factors (e.g., Elk-1, c-Myc, c-Jun, c-Fos, and C/EBP  $\beta$ ). The consensus primary sequence for substrate phosphorylation by ERK1 has been identified as -Pro-Leu-Ser/Thr-Pro-. ERK1 has been implicated in the control of a broad spectrum of cellular events in many types of cells. In somatic cells, ERK1 activation seems to be triggered after exit from a quiescent state (in G0 or G2) only and then inactivated by entry into a proliferative state.

#### **ERK1, Active recombinant protein - References**

Charest D.L.,et al.Mol. Cell. Biol. 13:4679-4690(1993).  
Aebersold D.M.,et al.Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.  
Cheng H.,et al.Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.  
Martin J.,et al.Nature 432:988-994(2004).  
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.