

## Erythropoietin receptor/EpoR Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73034
Synonyms:	EpoR; EPO-R; Erythropoietin R; Erythropoietin receptor
Species:	Mouse
Source:	HEK293
Accession:	P14753 (A25-P249)
Gene ID:	13857
Molecular Weight:	28-35 kDa

### PROPERTIES

AA Sequence	<pre> A P S P S L P D P K   F E S K A A L L A S   R G S E E L L C F T   Q R L E D L V C F W E E A A S S G M D F   N Y S F S Y Q L E G   E S R K S C S L H Q   A P T V R G S V R F W C S L P T A D T S   S F V P L E L Q V T   E A S G S P R Y H R   I I H I N E V V L L D A P A G L L A R R   A E E G S H V V L R   W L P P P G A P M T   T H I R Y E V D V S A G N R A G G T Q R   V E V L E G R T E C   V L S N L R G G T R   Y T F A V R A R M A E P S F S G F W S A   W S E P A S L L T A   S D L D P           </pre>
Biological Activity	Measured by its ability to inhibit Epo-dependent proliferation of TF-1 human erythroleukemic cells. The ED <sub>50</sub> for this effect is 17.15 ng/mL in the presence of 16 ng/mL of rmEpo, corresponding to a specific activity is 5.831×10 <sup>4</sup> units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Erythropoietin receptor (EpoR) serves as the key receptor for erythropoietin, orchestrating erythroblast proliferation and differentiation upon EPO stimulation. Through EpoR dimerization, it initiates the JAK2/STAT5 signaling cascade, leading to various cellular responses. In addition to activating STAT1 and STAT3 in specific cell types, EpoR may also engage the LYN
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tyrosine kinase. Upon EPO binding, EpoR forms homodimers and undergoes tyrosine phosphorylation, facilitating interactions with diverse SH2 domain-containing proteins such as LYN, APS, PTPN6, PTPN11, JAK2, PI3 kinases, STAT5A/B, SOCS3, CRKL, and ATXN2L. These interactions, intricate and multifaceted, modulate downstream signaling events, including mitogenic pathways and cell-surface expression. Notably, EpoR's interaction with NOSIP and the ubiquitin ligase NOSIP is implicated in EPO-induced cell proliferation, highlighting the regulatory complexity of EpoR-mediated signaling. Additionally, EpoR forms heterooligomers with FSFFV gp55 and associates with INPP5D/SHIP1, further expanding its functional repertoire in cellular processes.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA