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Human Erythropoietin (hEPO)



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cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
34-40	#P01588	2056
Background	EPO is a 34 kDa protein that is required for the survival and terminal differentiation of erythrocytes (1). EPO is produced by a number of cell types including tubular endothelial cells, interstitial cells, hepatocytes, Kupffer cells, astrocytes, and Schwann cells (2-4). EPO inhibits apoptosis and may protect neuronal cells from death during ischemia and/or neurodegenerative diseases (3,4). EPO inhibits the production of pro-inflammatory cytokines through inhibition of NF- κ B signaling (5). EPO protected against the development of diabetes in an animal model by promoting pancreatic β cell survival and growth (6). Binding of EPO to its cognate receptor, EPOR, induces activation of Jak2, Stat5 and Akt (3-5).	
Endotoxin	Less than 0.01 ng endotoxin/1 μ g hEPO.	
Purity	>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hEPO. All lots are greater than 98% pure.	
Source / Purification	Recombinant human Erythropoietin (hEPO) Ala28-Arg193 (Accession #NP_000790) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant hEPO was determined in a TF-1 cell proliferation assay. The ED ₅₀ of each lot is between 50-400 pg/ml.	
Background References	<ol style="list-style-type: none"> 1. Wu, H. et al. (1995) <i>Cell</i> 83, 59-67. 2. Koury, S.T. et al. (1989) <i>Blood</i> 74, 645-51. 3. Keswani, S.C. et al. (2011) <i>Proc Natl Acad Sci U S A</i> 108, 4986-90. 4. Um, M. and Lodish, H.F. (2006) <i>J Biol Chem</i> 281, 5648-56. 5. Nairz, M. et al. (2011) <i>Immunity</i> 34, 61-74. 6. Choi, D. et al. (2010) <i>J Exp Med</i> 207, 2831-42. 	

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