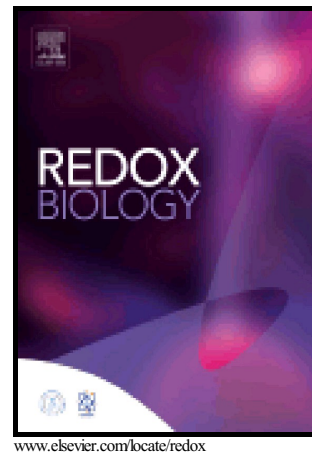


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Neuroprotective effect of a new variant of Epo nonhematopoietic against oxidative stress.

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Abstract

Human erythropoietin is mainly recognized for its hematopoietic function; however, by binding to its receptor (EpoR), it can activate different signaling pathways as STAT, PI3K, MAPK and RAS to increase cellular differentiation or provide neuroprotective effects, among others. A recombinant human erythropoietin variant with low glycosylation and without hematopoietic effect (EpoL) was purified from skimmed goat milk. Recombinant human erythropoietin (Epo) was obtained from CHO cell line and used as control to compare EpoL effects. Neuroprotection studies were performed in PC12 cells and rat hippocampal slices. Cells were pretreated during 1 hr with EpoL or Epo and exposed to oxidative agents (H₂O₂ or FCCP); cell viability was assayed at the end of the experiment by the MTT method. Hippocampal slices were exposed to 15 min of

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