

## Technical Data Sheet

## Mouse Erythropoietin Recombinant Protein

## Product Information

Material Number:	554597
Size:	5 µg
Concentration:	0.1 mg/ml
Reactivity:	QC Testing: Mouse
Storage Buffer:	Frozen aqueous buffered solution containing BSA and glycerol.

## Description

Mouse erythropoietin (EPO) is a 30 kD heavily glycosylated protein containing 166 amino acids. The carbohydrate residues compose approximately 30% of the molecule by weight.<sup>3</sup> It shares 80% and 95% homology with human and rat EPO, respectively. EPO functions as the survival and proliferation factors of late erythroid progenitor cells (CFU-E). In adult mammals, EPO is synthesized almost exclusively in the kidneys.

## Formulation and Purity

Recombinant mouse EPO is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered aqueous buffered solution, and containing 1 mg/ml biotechnology grade, low endotoxin bovine serum albumin, with no preservatives. The recombinant mouse EPO is > 95% pure, as determined by SDS-PAGE and an absorbance assay based on Beers-Lambert law. The endotoxin level is ≤ 0.1 ng per µg of mouse EPO, as measured in a chromogenic LAL assay.

## Preparation and Storage

Store product at -80°C prior to use or for long term storage of stock solutions.

Rapidly thaw and quick-spin product prior to use.

Avoid multiple freeze-thaws of product.

Upon initial thawing, the product should be aliquoted into polypropylene microtubes and frozen at -80°C for future use.

Alternatively, the product can be diluted in sterile neutral buffer containing not less than 0.5 - 10 mg/ml carrier protein such as

human or bovine albumin, aliquoted and stored at -80°C. For in vitro biological assay use, we recommend carrier-protein

concentrations of 0.5 – 1.0 mg/ml. For use as an ELISA standard we recommend carrier-protein concentrations of 5 - 10 mg/ml.

Failure to add carrier protein or store at indicated temperatures may result in a loss of activity. Carrier proteins should be pre-screened for possible effects in an appropriate experimental system. Carrier proteins may effect experimental results due to toxicity, high endotoxin levels or possible blocking activity.

## Application Notes

## Application

Bioassay	Routinely Tested
----------	------------------

## Recommended Assay Procedure:

## Biological Activity

Measured using TF-1 indicator cells

Specific Activity: 0.1 - 1.0 × 10<sup>8</sup> Units/mg (Unit is defined as the amount of material required to stimulate a half-maximal response at cytokine saturation).

ED50: 0.1 - 1.0 ng/ml; Observed linear dose response range: >100 fold

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

Jacobson LO, Goldwasser E, Fried W, Plzak L. Role of the kidney in erythropoiesis. *Nature*. 1957; 179(4560):633-634. (Biology)

Kitamura T, Tange T, Terasawa T, et al. Establishment and characterization of a unique human cell line that proliferates dependently on GM-CSF, IL-3, or erythropoietin. *J Cell Physiol*. 1989; 140(2):323-334. (Biology)

Krantz SB. Erythropoietin. *Blood*. 1991; 77(3):419-434. (Biology)

McDonald JD, Lin FK, Goldwasser E. Cloning, sequencing, and evolutionary analysis of the mouse erythropoietin gene. *Mol Cell Biol*. 1986; 6(3):842-848. (Biology)

## BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country-specific contact information, visit [bdbiosciences.com/how\\_to\\_order/](http://bdbiosciences.com/how_to_order/)

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2011 BD



Nagao, M., H. Suga, M. Okano, S. Masuda, H. Narita, K. Ikura, and R. Sasaki.. Nucleotide sequence of rat erythropoietin. *Biochim Biophys Acta*. 1992; 1171(1):99-102. (Biology)

Shoemaker CB, Mitscock LD. Murine erythropoietin gene: cloning, expression, and human gene homology. *Mol Cell Biol*. 1986; 6(3):849-858. (Biology)

Wu H, Liu X, Jaenisch R, Lodish HF. Generation of committed erythroid BFU-E and CFU-E progenitors does not require erythropoietin or the erythropoietin receptor. *Cell*. 1995; 83(1):59-67. (Biology)