# Recombinant Macaca fascicularis Erythropoietin (EPO)

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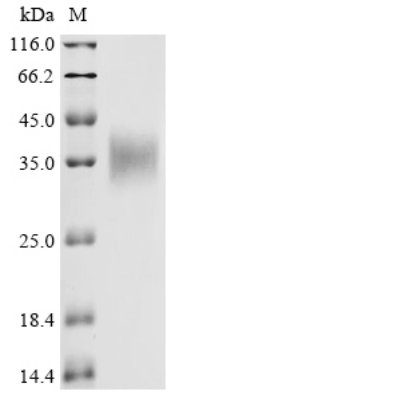
| **Product Code** | CSB-MP007743MOV |
| **Abbreviation** | Recombinant Cynomolgus monkey EPO protein |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | P07865 |
| **Storage Buffer** | Tris-based buffer,50% glycerol |
| **Product Type** | Recombinant Proteins |
| **Immunogen Species** | Macaca fascicularis (Crab-eating macaque) (Cynomolgus monkey) |
| **Purity** | Greater than 85% as determined by SDS-PAGE. |
| **Sequence** | APPRLICDSRVLERYLLEAKEAENVTMGCSESCSLNENITVPDTKVNFYAWKR MEVGQQAVEVWQGLALLSEAVLRGQAVLANSSQPFEPLQLHMDKAISGLRSIT TLLRALGAQEAISLPDAASAAPLRTITADTFCKLFRVYSNFLRGKLKLYTGEACR RGDR |
| **Research Area** | Cardiovascular |
| **Source** | Mammalian cell |
| **Target Names** | EPO |
| **Protein Names** | Recommended name: Erythropoietin |
| **Expression Region** | 28-192aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 6xHis-Myc-tagged |
| **Mol. Weight** | 22.2 kDa |
| **Protein Length** | Full Length of Mature Protein |
| **Image** | |




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

Recombinant Macaca fascicularis Erythropoietin (EPO) is produced in a mammalian cell expression system, which appears to ensure appropriate post-translational modifications. The protein corresponds to the full-length mature sequence and includes an N-terminal 6xHis-Myc tag for ease of purification and detection. With a purity greater than 85% as determined by SDS-PAGE, this product seems suitable for research applications requiring high-quality recombinant proteins.

Erythropoietin (EPO) is a vital glycoprotein hormone primarily responsible for regulating red blood cell production (erythropoiesis) in the bone marrow. It plays an essential role in maintaining the oxygen-carrying capacity of the blood and serves as a key factor in response to hypoxia. EPO is also involved in various signaling pathways and has become a significant focus in hematology and regenerative medicine research.

### Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

### 1. Comparative Protein Structure and Function Studies

This recombinant cynomolgus monkey EPO may serve as a valuable tool for comparative studies examining structural and functional differences between primate and human erythropoietin. The N-terminal 6xHis-Myc tag enables easy purification and detection, making it suitable for biochemical characterization assays. These might include protein folding studies, glycosylation pattern analysis, and stability assessments. Researchers can potentially investigate evolutionary conservation of EPO across primate species through comparative proteomics approaches.

### 2. Antibody Development and Cross-Reactivity Testing

The tagged cynomolgus EPO could function as an antigen for generating species-specific antibodies or testing cross-reactivity of existing anti-human

EPO antibodies. The His-tag allows for immobilization on nickel-coated surfaces for ELISA-based antibody screening and characterization assays. This application may be particularly valuable for researchers developing antibodies intended for use in non-human primate studies or investigating species-specific epitope recognition patterns.

**3. Protein-Protein Interaction Studies**

The dual His-Myc tagging system makes this protein suitable for pull-down assays to identify potential binding partners or cofactors that interact with cynomolgus EPO. Researchers can potentially use the His-tag for immobilization on affinity columns and the Myc-tag for detection in Western blot analysis of pulled-down complexes. This approach may enable investigation of EPO-mediated protein interactions in primate-specific cellular contexts.

**4. In Vitro Assay Development and Validation**

This recombinant protein could serve as a standard or control in developing cell-based assays using cynomolgus monkey cell lines or primary cells. The high purity level (>85%) makes it suitable for dose-response studies and assay optimization experiments. Researchers might use this protein to establish baseline parameters for in vitro studies that could later translate to non-human primate preclinical models.

**5. Immunogenicity and Safety Assessment Studies**

The recombinant cynomolgus EPO can be used in preclinical immunogenicity studies to evaluate potential immune responses in non-human primate models. Researchers may use this protein to assess antibody formation, complement activation, or cytokine release in ex vivo assays using primate immune cells. The mammalian expression system likely ensures proper post-translational modifications relevant for immunogenicity assessment studies.

**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.