

# Cytokines

## Human Recombinant Epigen



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

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Catalog # 78120  
78120.1

Epigen  
10 µg  
50 µg

## Product Description

Epigen belongs to the family of epidermal growth factor (EGF) ligands. It is expressed in a variety of tissues, including hepatic, testicular, cardiac, pulmonary, and others. Upon binding to EGF receptor expressed on epithelial cells, epigen triggers mitosis (Schneider & Yarden). The strong mitogenic potential can be explained by the low-affinity binding to EGF receptor, which results in downregulation of receptor ubiquitination. Epigen is also expressed in adenocarcinomas, suggesting a role in oncogenesis (Kochupurakkal et al.).

## Product Information

**Alternative Names:** EPG, EPGN, Epithelial mitogen  
**Accession Number:** Q6UW88-2  
**Amino Acid Sequence:** MAVTVTPPIT AQQADNIEGP IALKFSLHCL EDHNSYCING ACAFHHELEK AICRCFTGYT GERCEHLTLT SYA  
**Predicted Molecular Mass:** 8.1 kDa  
**Species:** Human  
**Cross Reactivity:** Mouse  
**Formulation:** Lyophilized after dialysis against phosphate-buffered saline.  
**Source:** E. coli

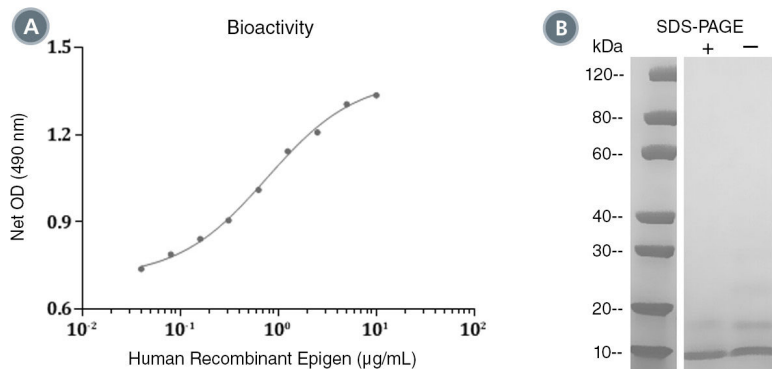
## Specifications

**Activity:** The specific activity is  $\geq 1.0 \times 10^3$  units/mg ( $EC_{50} \leq 1 \mu\text{g/mL}$ ) as determined by a cell proliferation assay using BALB/c 3T3 cells.  
**Purity:**  $\geq 95\%$   
**Endotoxin Level:** Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is  $\leq 0.2$  EU/ $\mu\text{g}$  protein.

## Preparation and Storage

**Storage:** Store at  $-80^\circ\text{C}$ .  
**Stability:** Stable as supplied for 12 months from date of receipt.  
**Preparation:** Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at  $2 - 8^\circ\text{C}$  for more than 2 weeks or at  $-20^\circ\text{C}$  for more than 3 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Human Recombinant Epigen was tested by its ability to promote the proliferation of BALB/c 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC<sub>50</sub> is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC<sub>50</sub> in the above example is less than 1 µg/mL.

(B) 2 µg of Human Recombinant Epigen was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant Epigen has a predicted molecular mass of 8.1 kDa.

## Related Products

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## References

- Kochupurakkal BS et al. (2005) Epigen, the last ligand of ErbB receptors, reveals intricate relationships between affinity and mitogenicity. *J Biol Chem* 280(9): 8503–12.
- Schneider MR & Yarden Y. (2014) Structure and function of epigen, the last EGFR ligand. *Semin Cell Dev Biol* 28: 57–61.

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