



## Activin-A, active, human recombinant

**Catalog No:** 97394  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Inhba, Inhibin beta A, FSH releasing protein

### Background

Activins are homodimers or heterodimers of the different  $\beta$  subunit isoforms, part of the TGF $\beta$  family. Mature Activin A has two 116 amino acids residues  $\beta$ A subunits ( $\beta$ A- $\beta$ A). Activin displays an extensive variety of biological activities, including mesoderm induction, neural cell differentiation, bone remodelling, haematopoiesis, and reproductive physiology. Activins takes part in the production and regulation of hormones such as FSH, LH, GnRH and ACTH. Cells that are identified to express Activin A include fibroblasts, endothelial cells, hepatocytes, vascular smooth muscle cells, macrophages, keratinocytes, osteoclasts, bone marrow monocytes, prostatic epithelium, neurons, chondrocytes, osteoblasts, Leydig cells, Sertoli cells, and ovarian granulosa cells.

### Description

Active form Activin-A human recombinant produced in *E. coli* is a homodimeric, non-glycosylated, polypeptide chain containing 2 x 117 amino acids and having a molecular weight of 26.2 kDa. Active form Activin-A is purified by standard chromatographic techniques.

### Physical Appearance

Sterile filtered, white, lyophilized (freeze dried) powder.

### Formulation

Human Activin-A was lyophilized from a concentrated 1 mg/ml protein solution containing 0.1% TFA.

### Solubility

INHBA protein should be reconstituted in distilled pyrogen free water to a concentration of 100  $\mu$ g/ml which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Activin-A, although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution Activin-A should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 95% as determined by SDS-PAGE.

### Amino Acid Sequence

MGLECDGKVN ICCKKQFFVS FKDIGWNDWI IAPSGYHANY CEGECPSHIA GTSGSSLSFH STVINHYRMR GHSPFANLKS  
CCVPTKLRPM SMLYYDDGQN IIKKDIQNMI VEECGCS

### Activity

Biological activity is assessed by the ability to induce cytotoxicity of MPC-11 cells and was found to be 8.8 ng/ml corresponding to a specific activity of  $1.1 \times 10^5$  Units/mg.

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### Usage

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