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## Product Data Sheet

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Product Name: Activin-A Human Active  
 Cat. No.: GP20001  
 Batch No.: 1

### Product Data

Purity	>98%	Source	E.Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Activin-A Human Active, Inhba, Inhibin beta A, FSH releasing protein.		
Amino Acid Sequence	MGLECDGKVN ICCKKQFFVS FKDIGWNDWI IAPSGYHANY CEGECPSHIA GTSGSSLSFH STVINHYRMR GHSPFANLKS CCVPTKLRPM SMLYYDDGQN IIKKDIQNMI VEECGCS.		
Solubility	Human INHBA protein should be reconstituted in distilled pyrogen free water to a concentration of 100ug /ml which can then be further diluted to other aqueous solutions.		
Formulation	Human Activin-A was lyophilized from a concentrated 1mg/ml protein solution containing 0.02% TFA.		

### Introduction

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.

### Biological Activity

Biological activity is assessed by the ability to induce cytotoxicity of MPC-11 cells and was

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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found to be 1-1.5 ng/ml corresponding to a specific activity of 666,667-1,000,000 Units/mg.

### Stability

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

### Background

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 26.2kDa. The Active form Activin-A is purified by standard chromatographic techniques.

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