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## Product Data Sheet

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Product Name: Activin A Human Plant  
 Cat. No.: GP20005  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Nicotiana benthamiana plant
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Inhba; Inhibin beta A; FSH releasing protein.		
Amino Acid Sequence	HHHHHHGLEC DGKVNICCKK QFFVSFKDIG WNDWIIAPSG YHANYCEGEC PSHIAGTSGS SLSFHSTVIN HYRMRGHSPF ANLKSCCVPT KLRPMSMLYY DDGQNIKKD IQNMIVEECG CS		
Solubility	It is recommended to reconstitute the lyophilized Activin A in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from 1mg/ml solution in Tris HCl 0.05M buffer at pH 7.4.		

### Introduction

Activins are homodimers or heterodimers of the different ? subunit isoforms, part of the TGF? family. Mature Activin A has two 116 amino acids residues betaA subunits (bA-bA). 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.

### 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

**Caution: Product has not been fully validated for medical applications. For research use only.**

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add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Activin A human Recombinant produced in *Nicotiana benthamiana* plant is a disulfide-linked homodimers of two betaA chains, each containing 116 amino residues (molecular formula C<sub>600</sub>H<sub>911</sub>N<sub>173</sub>O<sub>174</sub>S<sub>13</sub>) and 6-His-tag at the N-terminal having the total molecular mass of 27.4kDa.

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