PRODUCT INFORMATION SHEET
Recombinant Human Activin-A

PRODUCT DESCRIPTION

Cellaria's Recombinant Human Activin-A protein (also known as Inhibin A, encoded by INHBA gene) is a 26 kDa disulfide-linked homodimer of two Inhibin beta A chains, each containing 116 amino acid residues. Activin A homodimer has a major role in cell proliferation, differentiation, apoptosis, metabolism, homeostasis, immune response, wound repair, and endocrine function. Activin A is a member of the TGF-beta (transforming growth factor-beta) superfamily of proteins, activating Alk4 and Alk7 receptor-like kinases, followed by Smad2/3 activation, formation of dimer complex with Smad4, nuclear translocation and subsequent activation or inhibition of nuclear factors-mediated gene transcription in cells.

Figure 1

ORDERING INFORMATION

PRODUCT NAME	*CATALOG NUMBER*	*UNIT SIZE*	*FORMULATION*	*STORAGE TEMP*
Activin-A	CA-0310		Sterile, filtered, and lyophilized from 50 mM Citric Acid ($C_6H_8O_7$), pH 3.0	-80°C

PRODUCT HANDLING/DIRECTIONS FOR USE

Source: High-5 (BTI-Tn-5B1-4) Insect Cells

Stability: The lyophilized protein is stable for a 1 week at room temperature, store lyophilized preparation at ≤ –20°C, preferably desiccated.

Reconstituted Human Activin-A should be stored in working aliquots at at ≤ –20°C. Avoid repeated freeze/thaw cycles.

Purity: Greater than 95% by SDS-PAGE and HPLC analysis. Endotoxin level is less than 0.1 ng per µg (1EU/µg).

PRODUCT INFORMATION SHEET
Recombinant Human Activin-A

Reconstitution: Perform a quick spin (using the Quick Spin setting on the micro-centroifuge) followed by reconstitution in sterile PBS, containing 0.1% bovine(human) serum albumin (sterile-filtered through a 0.2-micron filter), to a concentration of 50 µg/ml (e.g., 5 µg/100µl). This will yield a solution of 10 mM Citric Acid, pH 3.0. The solution can then be stored at 4^0C for 2 weeks. It is recommended that further dilutions be made in PBS containing 0.1% bovine/human serum albumin (sterile-filtered) and stored at -20^0C.

Biological Activity: The ED50 was determined by measuring inhibition of murine MPC-11 cells. The expected ED50 is 0.5 - 2.0 ng/ml.

Usage: **For Research Purposes Only -**

Not for use in diagnostic or therapeutic procedures.

Country of Origin: USA

References:

Vale, W., Rivier, J., Vaughan, J., McClintock, R., Corrigan, A., Woo, W., Karr, D., and Spiess, J. (1986). Purification and characterization of an FSH releasing protein from porcine ovarian follicular fluid. Nature 321, 776-779

Philips, D.J., J.N. Brauman, A.J. Mason, D.M. de Kretser and M.P. Hedger (1999) A sensitive and specific in vitro bioassay for Activin using a mouse plasmacytoma cell line, MPC-11. Journal of Endocrinology 162:111–116.

Pauklin, S., and Vallier, L. (2015). Activin/Nodal signalling in stem cells. Development 142, 607.