



## Datasheet for ABIN1019702 Activin AB Protein (ACVAB)



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### 3 Images

#### Overview

|                      |  |
|----------------------|--|
| Quantity:            | 50 µg                                    |
| Target:              | Activin AB (ACVAB)                       |
| Origin:              | Human                                    |
| Source:              | Tobacco (Nicotiana benthamiana)          |
| Protein Type:        | Recombinant                              |
| Biological Activity: | Active                                   |
| Application:         | Cell Culture (CC), Western Blotting (WB) |

#### Product Details

|                  |  |
|------------------|--|
| Sequence:        | BetaA: GLECDGKVINI CCKKQFFVSF KDIGWNDWII APSGYHANYC EGECPSHIAG TSGSSLSFHSTVINHYRMRG HSPFANLKSC CVPTKLRPMS MLYYDDGQNI IKKDIQNMIV EECGCS<br>BetaB: GLECDGRTNL CCRQQFFIDF RLIWNDWII APTGYYGNYC EGSCPAYLAG VPGSASSFHTAVVNQYRMRG LNPGTVNSCC IPTKLSTMSM LYFDDEYNIV KRDVPMIVE ECG   |
| Specificity:     | Serological Identification: The protein was analysed by Dot-blot with specific antibodies  |
| Characteristics: | Molecular Formula: BetaA: C600H911N1730174S13/ BetaB: C615H910N1780177S12<br>Isoelectric Point: 6.8<br>Biological Activity: The biological activity of Activin AB is measured by its ability to inhibit mouse plasmacytoma cell line (MPC-11) cells proliferation. EC50 < 5 ng/mL are required to stimulate a half-maximal response at cytokine saturation. Note: Since applications vary, each investigator should titrate the reagent to obtain optimal results.<br>Extinction Coefficient: E 0.1 % (1g/L) = 1.56 (A 280 nm) |
| Endotoxin Level: | < 0.04 EU/µg protein (LAL method)  |

## Target Details

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Target: [Activin AB \(ACVAB\)](#)

Abstract: [ACVAB Products](#)

Background: Synonyms: Activin beta A beta B heterodimer

Activins are homodimers or heterodimers of the various Beta subunit isoforms, belonging to the TGF-beta family. Mature Activin AB has two chains of 116 and 123 amino acids residues (betaA-betaB). Activin exhibits a wide range of biological activities, including mesoderm induction, neural cell differentiation, bone remodelling, haematopoiesis, and reproductive physiology. Activins plays a key role in the production and regulation of hormones such as FSH, LH, GnRH and ACTH. Inhibins /Activins are proteins that are formed by the dimerization of two subunits, i. e. an alpha with either betaA -inhibin A- or betaB - inhibin B. The subunits betaA and betaB can also form homodimers or heterodimers called activins: Activin A (betaAbetaA), Activin B (betaBbetaB) and Activin AB (betaAbetaB). The activin gene family comprises the additional, but poorly characterized members activin betaC, betaD, and betaE. - As with other members of the super-family, Activins interact with two types of cell surface trans-membrane receptors (Types I and II) which have intrinsic serine/threonine kinase activities in their cytoplasmic domains, Activin type 1 receptors, ACVR1, ACVR1B, ACVR1C and Activin type 2 receptors, ACVR2A, ACVR2B. - The development of assays distinguishing between different forms of activins and inhibins, along with knock-in and knock-out models, have provided evidence that the betaA- and betaB-subunits have independent and separate roles physiologically. Additionally, evaluation of ligand-receptor interactions indicates significant differences in receptor affinity between activin isoforms, as well as between inhibin isoforms.

UniProt: [P08476](#), [P09529](#)

## Application Details

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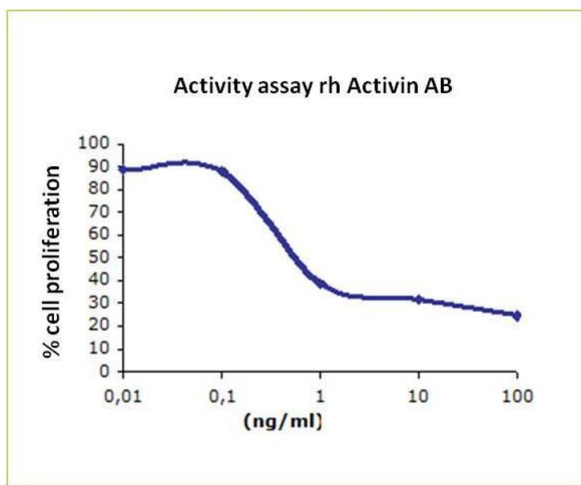
Comment: Activin AB is a disulphide linked heterodimer of subunits betaA / betaB . BetaA Single chain, containing 116 aa (13.7 kDa) and BetaB single chain, 123 amino residues (14kDa). Recombinant human Activin AB contains a His-tag at the N-terminal end. Human recombinant protein expressed in *Nicotiana benthamiana*. It is produced by transient expression in non-transgenic plants and is purified by sequential chromatography (FPLC). This product contains no animal-derived components or impurities. Animal Free product. The protein was resolved by SDS polyacrylamide gel electrophoresis and the gel was stained with coomassie blue.

Restrictions: For Research Use only

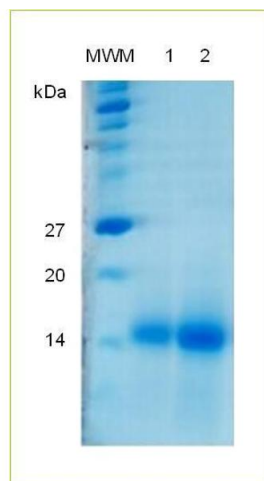
## Handling

|                 |  |
|-----------------|--|
| Format:         | Lyophilized  |
| Reconstitution: | Lyophilized protein should be reconstituted in water to a concentration of 50 ng/μL. Optimal concentration should be determined for specific application and cell lines. Optimal concentration should be determined for specific application and cell lines. |
| Buffer:         | Tris HCl 0.05 M buffer pH 7.4  |
| Storage:        | 4 °C   |

## Images

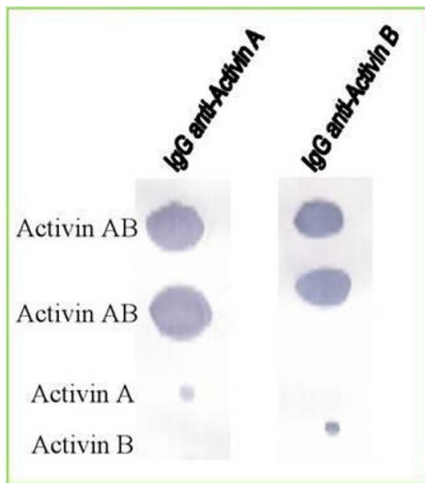


**Image 1.** The biological activity of Activin AB is measured by its ability to inhibit mouse plasmacytoma cell line (MPC-11 cells) cells proliferation. EC50 <5 ng/mL are required to stimulate a half-maximal response at cytokine saturation. Note: Since applications vary, each investigator should titrate the reagent to obtain optimal results.



### SDS-PAGE

**Image 2.** SDS-PAGE analysis of human recombinant Activin AB. Lane MWM: molecular weight marker (kDa). Lane1: 1 μg and lane 2: 2 μg of human recombinant Activin AB.



**Image 3.** Serological identification. Dot-blot analysis of human recombinant Activin AB, Activin A and Activin B with specific antisera.