

Activin Active Protein | INHBA active protein

Human Activin Recombinant (CHO Cell)

CATALOG #	HOST
AAA76389	Chinese Hamster Ovary cell line (Note: Host protein expression may be lot-specific and can be subject to change during production, including bulk orders.)

PRODUCT SYNONYMS

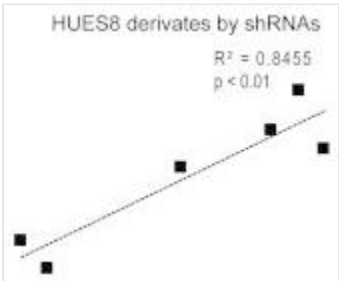
Activin; Human Activin Recombinant (CHO Cell); INHBA active protein

PRODUCT SPECIFICATIONS

Host	Chinese Hamster Ovary cell line (Note: Host protein expression may be lot-specific and can be subject to change during production, including bulk orders.)
Purity/Purification	>97%, as determined by SDS-PAGE and HPLC
Form/Format	Human Activin A was lyophilized from a 0.2 um filtered solution in 0.2M AcOH, pH 4.0.
Sequence	MPLLWLRGFL LASCWIVRS SPTPGSEGHS AAPDCPSCAL AALPKDVPNS 50QPEMVEAV KKHILNMLHL KKRPDVTQPV PKAALLNAIR KLHVGKVGGEN GY100VEIED DIGRRAEMNE LMEQTSEIIT FAESGTARKT LHFEISKEGS DLSVV150ER AEVWLFLKVP KANRTRTKVT IRLFQQQKHP QGSLDTGEEA EEVGLKGE20 ORSELLSEK VVDARKSTWH VFPVSSSIQR LLDQ GKSSLD VRIACEQCQE S250GASLVL LGKKKKKEEE GEGKKKGGGE GGAGADEEKE QSHRPFLMLQ ARQS300EDH PHRRRRRGLE CDGKVNICK KQFFVSFKDI GWNDWIIAPS GYHANYC350 EGECPSHIAG TSGSSLSFHS TVINHYRMRG HSPFANLKSC CVPTKLRPMS 400MLYYDDG QNIKKDIQN MIVEECGCS4 26
Source	Optimized DNA sequence encoding Human Inhibin Beta Alpha Chain was expressed in Chinese Hamster Ovary cell line.
Endotoxin	Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/ug (1EU/ug).
Biological Activity	The ED(50) was determined by the dose-dependent proliferation of murine MCP11 cell line was found to be in the less than 1 ng/ml.
Method	Isolation, culture and 48 h induction of neural stem cells For 48 h induction using serum-free conditions with growth factors, dissociated neurospheres were cultured with recombinant human (rh) BMP4 250 ng/mL, rh Activin A 100 ng/mL and rh bFGF 100 ng/mL individually as well as in combinations as indicated in Supporting Information Fig S1 and Blimp1-/- EpiSC Derivation and Culture EpiSCs were derived from E6.5 epiblasts by culturing on MEFs in medium'>N2B27 medium containing human activin A (20 ng/ml), bFGF (12 ng/ml), and KSR (20%) (Human ES cell culture and differentiation Human H1, H9 and UCLA1-6 (UCLA stem cell core) [-1 bFGF. EBs were differentiated according to previous reports with minor modification [uM Y27632 (Rho kinase inhibitor IV, EMD Chemicals), 3 ng ml-1 Activin A, 5 ng ml-1 bFGF, 10 ng ml-1 BMP4 and 5 uM IWR-1 (EMD Chemicals), for the first 4 days. EBs were then cultured in StemPro 34 supplemented with 10 ng ml-1 bFGF, 5 ng ml-1 vascular endothelial growth factor (VEGF) and 5 uM IWR-1 for 5 additional days before plating onto elastic substrates. Usage of all human ES cell lines is approved by the UCLA Embryonic Stem Cell Research Oversight (ESCRO) Committee and the Institutional Review Boards (IRB, approval #2009-006-04). Differentiation of human ESC and iPSC into definitive endoderm Differentiation into definitive endoderm was performed as previously described. Briefly, pluripotent stem cells were harvested, gently triturated into single cell suspensions and seeded onto transwells (0.4um pore size, Corning) pre-coated with human placental collagen Type IV, which has previously been shown to support airway epithelial cell growth. The cells were immediately treated with 100ng/ml Activin-A and 25ng/ml WNT3A for 4 consecutive days in Endoderm ifferentiation Media consisting of serum-free Knockout MEM with Glutamax, penicillin/streptomycin (GIBCO), 1 mM nonessential amino acids (GIBCO) and 0.5 mM mercaptoethanol. Subsequent differentiation steps were performed on the transwells.

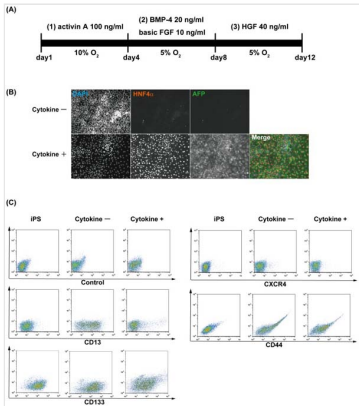
Molecular Function	Growth-factor, Hormone
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers
Preparation and Storage	The lyophilized protein is stable for at least 2 years from date of receipt at -20 degree C. Upon reconstitution, this cytokine can be stored in working aliquots at 2 degree -8 degree C for one month, or at -20 degree C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

IMAGES



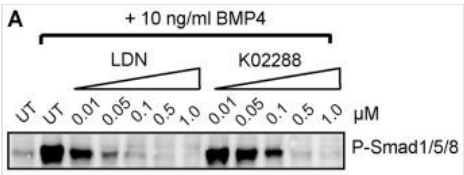
Application Data

WNT3 Is a Functional Biomarker for Predicting the DE Differentiation Potential (A) WNT3 levels in control and various knockdown HUES8 sublines correlate with their DE differentiation efficiency.The four protocols included the following treatments in a serum-free medium: (1) A -> A (Activin A only for 4 days); (2) AW -> A (Activin A and Wnt3a for 2 days followed by Activin A only for another 2 days); (3) A -> AX (Activin A only for 2 days followed by Activin A and XAV 939 for another 2 days); and (4) AW -> AX (Activin A and Wnt3a for 2 days followed by Activin A and XAV 939 for another 2 days).



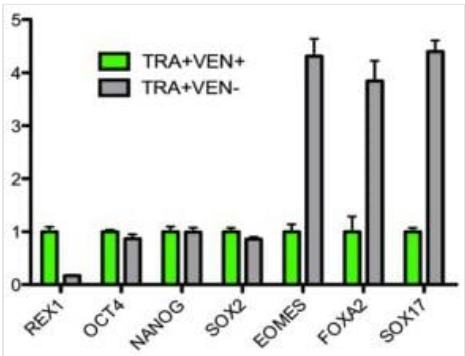
Application Data

Differentiation from human iPS cells toward hepatic lineage cells.Human iPS cells were sequentially stimulated with various cytokines: (1) activin A, (2) basic FGF and BMP-4, and (3) HGF.



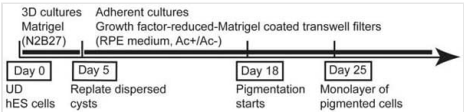
Application Data

K02288 selectively inhibits BMP signaling.



Application Data

Loss of REX1 within the pluripotent population primes cells for differentiation.n=?3 E) Fold enrichment of the percentage of GATA4 positive endoderm cells generated from TRA+VEN? cells relative to those from TRA+VEN+ population after 3 days of treatment with Activin A and BMP4 in low serum media, as observed by immunocytochemistry.



Application Data

Directed differentiation of hESC-derived cysts to RPE using transwell filters.Ac+/Ac?: with or without Activin A.

ADDITIONAL INFORMATION

Product Categories/Family for INHBA active protein	Cytokines; Mouse reagents; Recombinant Mouse Cytokines
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4504699
NCBI GeneID	3624
NCBI Accession #	NP_002183.1
NCBI GenBank Nucleotide #	NM_002192.2
UniProt Accession #	P08476
Molecular Weight	426
NCBI Official Full Name	inhibin beta A chain
NCBI Official Synonym Full Names	inhibin, beta A
NCBI Official Symbol	INHBA
NCBI Official Synonym Symbols	EDF; FRP
NCBI Protein Information	inhibin beta A chain; Inhibin, beta-1; activin beta-A chain; FSH-releasing protein; erythroid differentiation factor; erythroid differentiation protein; follicle-stimulating hormone-releasing protein; inhibin, beta A (activin A, activin AB alpha polypepti
UniProt Protein Name	Inhibin beta A chain
UniProt Gene Name	INHBA
UniProt Synonym Gene Names	EDF
UniProt Entry Name	INHBA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/chinese-hamster-ovary-active-protein/activin/76389>