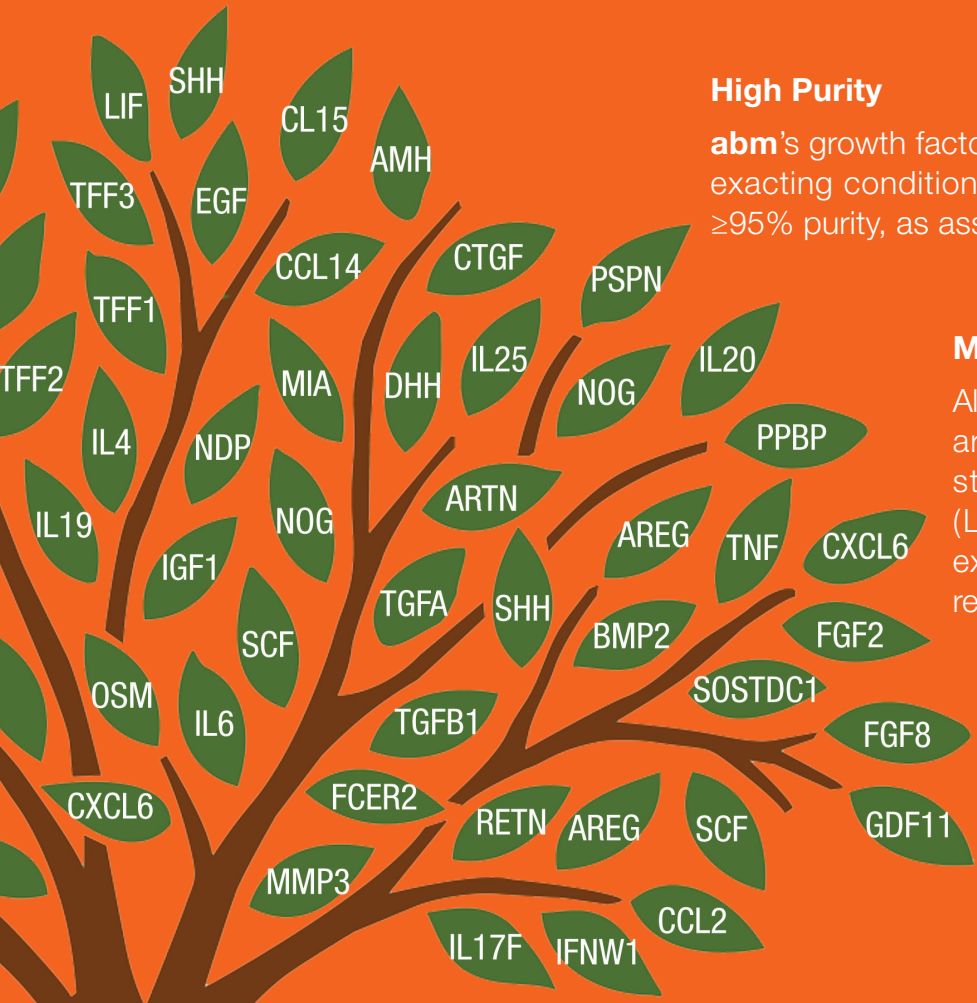




# Growth Factors & Cytokines

## Quality and Reliability shouldn't cost a fortune!

With **abm's** growth factors and cytokines, you can get the consistent quality your research demands at a price you can afford.



### High Purity

**abm's** growth factors and cytokines are produced under exacting conditions that ensure consistent quality and ≥95% purity, as assessed by SDS-PAGE, on every lot.

### Minimal Endotoxin

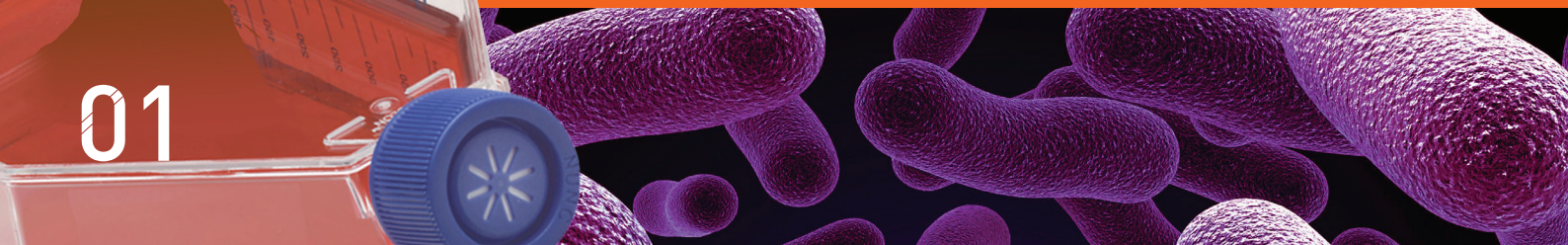
All of **abm's** growth factors and cytokines are tested for endotoxin levels by the standard Limulus Amebocyte Lysate (LAL) assay and guaranteed not to exceed the acceptable limit of 1 EU/μg recombinant protein.

### Assured Biological Activity

Every lot of **abm's** growth factor/cytokine product is assayed to confirm biological activity at expected levels.

### Flexible Aliquot Size and Option for Animal-Free Version

**abm** can custom-package growth factor/cytokine products to meet customer needs. In addition, **abm** can provide "animal-free" versions of all recombinant growth factor and cytokine products for particularly sensitive applications.

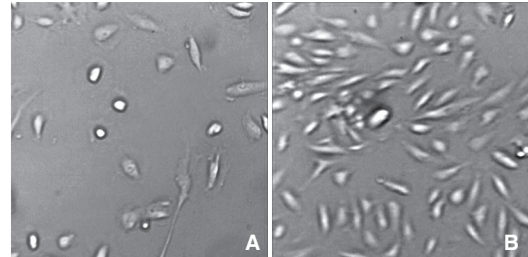


## Growth Factors & Cytokines

Growth factors and cytokines are naturally occurring signalling molecules that are central to the crucial and complex network of cell to cell communication in higher organisms. These molecules play a vital role in determining the fate of all cellular processes by carrying regulatory messages between cells. While cytokines are mostly associated with immune system housekeeping, growth factors act to regulate a wide range of processes during both the developmental and mature stage of an organism. It is noteworthy that uncontrolled, 'rogue' activation of growth factor signalling is frequently associated with oncogenesis.

Considering their crucial roles, it is not surprising that growth factors/cytokines are indispensable to many aspects of research in cell biology. In traditional cell biology experiments, animal serum has often served as a rich, but heterogeneous, source of growth factors and nutrients required for normal cell metabolism. However, the use of animal serum is undesirable due to:

- Increased risk of viral, mycoplasma and prion contamination,
- High cost and ethical concerns associated with serum collection,
- Difficulty in accurate interpretation of experimental results in the context of non-standardized media with possible inclusion of growth inhibitors in the same.



**Figure:** Increase in proliferation of Human Umbilical Vein Endothelial Cells (HUVEC) upon addition of VEGF; **(A)** Negative control **(B)** With addition of **abm's** Recombinant Human Vascular Endothelial Growth Factor (VEGF) 121AA (Cat No: ZP15693M) at the final concentration of 10ng/ml.

A switch from animal serum to recombinant growth factors is the logical choice for many types of research. **abm's** reliable, high quality products can help your laboratory make this switch.

## Product List (made in *E.coli*)

Product Name	Cat.No.	Product Name	Cat.No.	Product Name	Cat.No.
Recombinant Human 4-1BB Receptor (TNFRSF9)	Z101085	Recombinant Human CCL2	Z100625	Recombinant Human ENA-78 (CXCL5)	Z100165
Recombinant Human 4-BBL (TNFSF9)	Z102255	Recombinant Human CCL21	Z100195	Recombinant Human Eotaxin (CCL11)	Z100175
Recombinant Human Activin A (INHBA)	Z101665	Recombinant Human CCL22	Z101015	Recombinant Human Eotaxin-2 (CCL24)	Z100185
Recombinant Human Adiponectin (Acrp30)	Z102595	Recombinant Human CCL25	Z101525	Recombinant Human Eotaxin-3 (CCL26)	Z101575
Recombinant Human AIMP1	Z100155	Recombinant Human CCL3	Z100675	Recombinant Human Epregrulin (EREG)	Z100995
Recombinant Human AITRL (TNFSF18)	Z101725	Recombinant Human CCL4	Z100685	Recombinant Human FGF1	Z100005
Recombinant Human AREG	Z101875	Recombinant Human CD40 Ligand (CD40LG)	Z100125	Recombinant Human FGF10	Z100205
Recombinant Human Artemin (ARTN)	Z102355	Recombinant Human Chemerin	Z102205	Recombinant Human FGF16	Z102295
Recombinant Human BAFF-R (TNFRSF13C)	Z100015	Recombinant Human CNTF	Z100955	Recombinant Human FGF17	Z102305
Recombinant Human BCA-1 (CXCL13)	Z100075	Recombinant Human CTACK (CCL27)	Z101885	Recombinant Human FGF18	Z102315
Recombinant Human B-cell Activating Factor (TNFSF13B)	Z100965	Recombinant Human CTGF	Z102025	Recombinant Human FGF19	Z102325
Recombinant Human B-cell Maturation Protein (TNFRSF17)	Z101445	Recombinant Human CXCL1	Z100285	Recombinant Human FGF2	Z101455
Recombinant Human BDNF	Z100065	Recombinant Human CXCL11	Z100585	Recombinant Human FGF20	Z101715
Recombinant Human Beta-Defensin 1 (DEFB1)	Z100025	Recombinant Human CXCL12 (SDF-1 alpha)	Z101635	Recombinant Human FGF21	Z101105
Recombinant Human Beta-Defensin 2 (DEFB4A)	Z100035	Recombinant Human CXCL12 (SDF-1 beta)	Z101645	Recombinant Human FGF23	Z100985
Recombinant Human Beta-Defensin 3 (DEFB103A)	Z100045	Recombinant Human CXCL14 (BRAK)	Z102375	Recombinant Human FGF3	Z102285
Recombinant Human Beta-Defensin 4 (DEFB104A)	Z100055	Recombinant Human CXCL16	Z102385	Recombinant Human FGF4	Z102605
Recombinant Human BMP2	Z100085	Recombinant Human CXCL2	Z100295	Recombinant Human FGF6	Z101685
Recombinant Human BMP-3 beta (GDF10)	Z100095	Recombinant Human CXCL4 (PF4)	Z101005	Recombinant Human FGF8	Z101705
Recombinant Human BMP4	Z100105	Recombinant Human DAND5	Z102135	Recombinant Human FGF9	Z100215
Recombinant Human Cardiotrophin-1 (CT-1)	Z102365	Recombinant Human DHH	Z101695	Recombinant Human FLT3 Ligand (FLT3LG)	Z100225
Recombinant Human CCL1	Z101905	Recombinant Human EGF	Z100135	Recombinant Human Follistatin (FST)	Z101035

Product Name	Cat.No.	Product Name	Cat.No.	Product Name	Cat.No.
Recombinant Human Fractalkine (CX3CL1)	Z101895	Recombinant Human IL31	Z100525	Recombinant Human OPG (TNFRSF11B)	Z101775
Recombinant Human Galectin-1 (LGALS1)	Z101845	Recombinant Human IL33	Z100535	Recombinant Human OSM	Z100755
Recombinant Human Galectin-3 (LGALS3)	Z101825	Recombinant Human IL36A	Z101865	Recombinant Human PDGFA	Z100365
Recombinant Human GCP-2 (CXCL6)	Z101805	Recombinant Human IL36B	Z102465	Recombinant Human PDGFB	Z100355
Recombinant Human G-CSF (CSF3)	Z100245	Recombinant Human IL36G	Z102215	Recombinant Human PDGFC	Z101785
Recombinant Human GDF3	Z101735	Recombinant Human IL37/IL23	Z102085	Recombinant Human Persephin (PSPN)	Z102495
Recombinant Human GDNF	Z101055	Recombinant Human IL4	Z100545	Recombinant Human PIGF	Z102615
Recombinant Human GGF2	Z101655	Recombinant Human IL6	Z100555	Recombinant Human Prolactin (PRL)	Z102145
Recombinant Human GH1	Z100265	Recombinant Human IL7	Z100975	Recombinant Human PTH	Z100775
Recombinant Human GM-CSF (CSF2)	Z100275	Recombinant Human IL8 (72aa)	Z101605	Recombinant Human RANKL (TNFSF11)	Z102265
Recombinant Human GMFB	Z101115	Recombinant Human IL8 (77aa)	Z101615	Recombinant Human RANTES (CCL5)	Z100785
Recombinant Human GRO gamma (CXCL3)	Z101465	Recombinant Human IL9	Z102475	Recombinant Human Resistin (RETN)	Z100805
Recombinant Human HB-EGF (Heparin Binding EGF)	Z102155	Recombinant Human IP-10 (CXCL10)	Z100575	Recombinant Human Resistin-like beta (RETNLB)	Z101955
Recombinant Human HCC-1 (CCL14)	Z100305	Recombinant Human KGF (FGF7)	Z100595	Recombinant Human S100A13	Z102195
Recombinant Human HCC-2 (CCL15)	Z100315	Recombinant Human LEC (CCL16)	Z100325	Recombinant Human S100A4	Z101505
Recombinant Human IFNA1 (IFN-alpha1)	Z102395	Recombinant Human Leptin (LEP)	Z101855	Recombinant Human sCD23 (FCER2)	Z101835
Recombinant Human IFNA2	Z101585	Recombinant Human LIF	Z100605	Recombinant Human SERPINF1	Z100765
Recombinant Human IFNA4	Z102405	Recombinant Human LTA	Z100865	Recombinant Human SHH	Z101675
Recombinant Human IFNG	Z100345	Recombinant Human Lymphotoxin (XCL1)	Z100615	Recombinant Human SOD1	Z100795
Recombinant Human IGF1	Z100385	Recombinant Human MANF	Z102065	Recombinant Human Stem Cell Factor (KITLG)	Z100815
Recombinant Human IGF2	Z102345	Recombinant Human Maspin (SerpinB5)	Z102505	Recombinant Human TARC (CCL17)	Z100835
Recombinant Human IGFBP3	Z100375	Recombinant Human MCP-2 (CCL8)	Z100635	Recombinant Human TFF1	Z101975
Recombinant Human IGFBP5	Z102015	Recombinant Human MCP-3 (CCL7)	Z101915	Recombinant Human TFF2	Z101985
Recombinant Human IGFBP7	Z102035	Recombinant Human MCP-4 (CCL13)	Z100645	Recombinant Human TFF3	Z101995
Recombinant Human IL10	Z101495	Recombinant Human M-CSF (CSF1)	Z100655	Recombinant Human TGF Beta-3 (TGFB3)	Z102515
Recombinant Human IL11	Z100425	Recombinant Human MEC (CCL28)	Z101025	Recombinant Human TGFA	Z101935
Recombinant Human IL13	Z100445	Recombinant Human MIA	Z102045	Recombinant Human THPO	Z101515
Recombinant Human IL15	Z100455	Recombinant Human MIA2	Z102055	Recombinant Human Thymosin-Beta 4 (TMSB4X)	Z102005
Recombinant Human IL16	Z102415	Recombinant Human Midkine (NEGF2)	Z102175	Recombinant Human TNF	Z100855
Recombinant Human IL17A	Z100465	Recombinant Human MIF	Z100915	Recombinant Human TNFRSF10B	Z102245
Recombinant Human IL17C	Z102225	Recombinant Human MIG (CXCL9)	Z100665	Recombinant Human TNFRSF1A	Z102235
Recombinant Human IL17D	Z102425	Recombinant Human MIP-1 beta (CCL4L1)	Z102105	Recombinant Human TNFRSF1B	Z101745
Recombinant Human IL17F	Z102435	Recombinant Human MIP-3 (CCL23)	Z100695	Recombinant Human TRAIL (TNFSF10)	Z101755
Recombinant Human IL18	Z100475	Recombinant Human MIP-3 alpha (CCL20)	Z100705	Recombinant Human TSLP	Z101095
Recombinant Human IL19	Z102445	Recombinant Human MIP-3 beta (CCL19)	Z101945	Recombinant Human TWEAK (TNFSF12)	Z102275
Recombinant Human IL1A	Z100405	Recombinant Human MIP-4 (CCL18)	Z100715	Recombinant Human TWEAK Receptor (TNFRSF12A)	Z102525
Recombinant Human IL1B	Z100395	Recombinant Human MMP2	Z101815	Recombinant Human Uteroglobin (SCGB1A1)	Z101965
Recombinant Human IL1RN	Z100415	Recombinant Human MSTN	Z100255	Recombinant Human VEGF (121aa)	Z102115
Recombinant Human IL2	Z100485	Recombinant Human NAP-2 (PPBP) (CXCL7)	Z100725	Recombinant Human VEGF (165aa)	Z100895
Recombinant Human IL20	Z101075	Recombinant Human Neuritin	Z102185	Recombinant Human VEGFB	Z102535
Recombinant Human IL21	Z100495	Recombinant Human Nodal	Z102485	Recombinant Human WISP2	Z101925
Recombinant Human IL22	Z100945	Recombinant Human Noggin (NOG)	Z100925	Recombinant Human WISP3	Z102545
Recombinant Human IL28A	Z102455	Recombinant Human NOV	Z102075	Recombinant Human WNT1	Z102125
Recombinant Human IL29 (IFNL1)	Z100505	Recombinant Human NRG1	Z101625	Recombinant Mouse Beta-Defensin 1 (DEFB1)	Z200265
Recombinant Human IL3	Z100515	Recombinant Human NRG4	Z100905	Recombinant Mouse Beta-Defensin 2 (DEFB2)	Z200285

Product Name	Cat.No.	Product Name	Cat.No.	Product Name	Cat.No.
Recombinant Mouse Beta-Defensin 3 (DEFB3)	Z200275	Recombinant Mouse IL18BP	Z200425	Recombinant Mouse VEGF (120aa)	Z200585
Recombinant Mouse CCL22	Z200315	Recombinant Mouse IL1A	Z200095	Recombinant Mouse VEGF (164aa)	Z200575
Recombinant Mouse CCL25	Z200325	Recombinant Mouse IL1B	Z200105	Recombinant Rat CNTF	Z300035
Recombinant Mouse CXCL1	Z200345	Recombinant Mouse IL2	Z200135	Recombinant Rat CXCL1	Z300105
Recombinant Mouse CXCL12 (SDF-1 beta)	Z200205	Recombinant Mouse IL25	Z200255	Recombinant Rat CXCL2	Z300115
Recombinant Mouse CXCL2	Z200355	Recombinant Mouse IL3	Z200145	Recombinant Rat EGF	Z300045
Recombinant Mouse CXCL4 (PF4)	Z200305	Recombinant Mouse IL33	Z200155	Recombinant Rat Eotaxin (CCL11)	Z300145
Recombinant Mouse EGF	Z200025	Recombinant Mouse IL4	Z200165	Recombinant Rat FGF2	Z300005
Recombinant Mouse Eotaxin (CCL11)	Z200035	Recombinant Mouse IL6	Z200175	Recombinant Rat G-CSF (CSF3)	Z300185
Recombinant Mouse Eotaxin-2 (CCL24)	Z200405	Recombinant Mouse KGF (FGF7)	Z200185	Recombinant Rat GRO gamma (CXCL3)	Z300135
Recombinant Mouse Exodus-2 (CCL21A)	Z200045	Recombinant Mouse LIF	Z200195	Recombinant Rat IFNG	Z300015
Recombinant Mouse FGF1	Z200005	Recombinant Mouse LIX (CXCL5)	Z200555	Recombinant Rat IGF1	Z300055
Recombinant Mouse FGF2	Z200015	Recombinant Mouse MCP-2 (CCL8)	Z200395	Recombinant Rat IL10	Z300025
Recombinant Mouse FLT3 Ligand (FLT3LG)	Z200055	Recombinant Mouse MCP-5 (CCL12)	Z200385	Recombinant Rat IL13	Z300095
Recombinant Mouse G-CSF (CSF3)	Z200605	Recombinant Mouse MEC (CCL28)	Z200335	Recombinant Rat IL17	Z300175
Recombinant Mouse GH1	Z200065	Recombinant Mouse MIF	Z200295	Recombinant Rat IL1B	Z300075
Recombinant Mouse GM-CSF (CSF2)	Z200075	Recombinant Mouse MIP-1 gamma (CCL9)	Z200375	Recombinant Rat IL2	Z300195
Recombinant Mouse GRO gamma (CXCL3)	Z200415	Recombinant Mouse MIP-3 (CCL19)	Z200455	Recombinant Rat IL20	Z300165
Recombinant Mouse IFNG	Z200085	Recombinant Mouse Noggin (NOG)	Z200235	Recombinant Rat IL3	Z300205
Recombinant Mouse IGF1	Z200625	Recombinant Mouse SHH	Z200615	Recombinant Rat IL5	Z300155
Recombinant Mouse IL10	Z200115	Recombinant Mouse SR-PSOX (CXCL16)	Z200365	Recombinant Rat IL6	Z300085
Recombinant Mouse IL11	Z200125	Recombinant Mouse Stem Cell Factor (KITLG)	Z200595	Recombinant Rat LIX (CXCL5)	Z300125
Recombinant Mouse IL13	Z200245	Recombinant Mouse THPO	Z200535	Recombinant Rat TNF	Z300065
Recombinant Mouse IL17	Z200435	Recombinant Mouse TNF	Z200215		

For growth factors and cytokines from mammalian system(s) and/or for bulk sizes, please refer to our website: <http://www.abmgood.com/Growth-Factors-Cytokines.html>



Ljubomira Stojanovića 3, 11108 Belgrade, Serbia  
 Website: [www.alfamed.rs](http://www.alfamed.rs)  
 Email: [info@alfamed.rs](mailto:info@alfamed.rs)  
 Phone: +381-11-3292-888

## Technical Support

Applied Biological Materials Inc.

Telephone: (8:30am - 4:30pm PST, Mon - Fri)



Toll Free: 1-866-757-2414  
 Local: 604-247-2416  
 Fax: 604-247-2414

Address: Suite #1 - 3671 Viking Way, Richmond, BC,  
 Canada V6V 2J5

Website: [www.abmGood.com](http://www.abmGood.com)

Email:



General Information: [info@abmGood.com](mailto:info@abmGood.com)  
 Order: [order@abmGood.com](mailto:order@abmGood.com)  
 Technical Support: [technical@abmGood.com](mailto:technical@abmGood.com)  
 Business Development: [bd@abmGood.com](mailto:bd@abmGood.com)