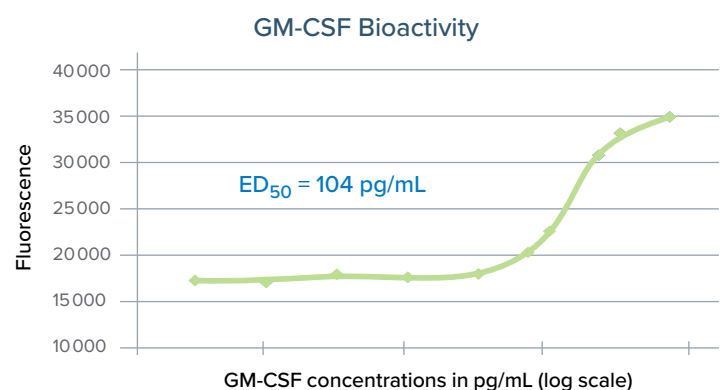
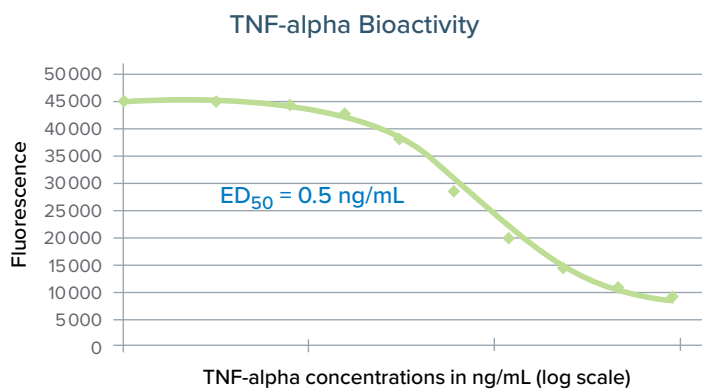


Recombinant Human Growth Factors

Animal component-free growth factors for cell culture applications

- Animal component-free and carrier-free
- Expressed in *E. coli*
- High biological activity verified by relevant bioactivity assay
- Lyophilized form to ensure stability
- High purity ($\geq 95\%$)

Access to high quality and affordable clinical grade key components for primary and stem cell culture, such as growth factors derived from animal component-free (ACF) processes, remains a significant challenge to the success of developing primary and stem cell-based therapies. Our selection of high quality human recombinant growth factors/cytokines produced in *E. coli* systems to support a variety of cell culture applications including activation, expansion, and differentiation. They are the ideal complement to our PRIME-XV portfolio of chemically-defined and serum-free media and reagents.



Examples of bioactivity dose response curves performed for ACF Recombinant Human TNF-alpha (left) and GM-CSF (right). TNF-alpha ED₅₀ was determined by the cytolysis of mouse L929 cells in the presence of Actinomycin D. GM-CSF ED₅₀ was determined by a dose dependent proliferation of human TF1 cells.

Ordering Information

Item	Catalog #	Size*	Accession #	Bioactivity
Recombinant Human Activin A ACF	95106	10 µg	P08476	ED ₅₀ typically 0.5-5 ng/mL. ED ₅₀ is determined by dose-dependent proliferation inhibition of mouse plasmocytoma cell line MPC-11.
Recombinant Human CD40 Ligand ACF	95104	10 µg	P29965	ED ₅₀ is typically 0.5-1.5 µg/L. ED ₅₀ is determined by a dose-dependent proliferation of B cells from human PBMCs in the presence of IL-4.
Recombinant Human EGF ACF	95108	100 µg	P01133	ED ₅₀ is typically less than 15 pg/mL. ED ₅₀ is determined by dose-dependent proliferation of BALB/c 3T3 cells.
Recombinant Human FGF-basic 154 ACF	95109	10 µg	P09038	ED ₅₀ typically 2-3 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of mouse BALB/c 3T3 cells.
Recombinant Human FLT-3 Ligand ACF	95120	10 µg	P49771	ED ₅₀ is typically less than 5 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of OCI-AML5 cells.
Recombinant Human GM-CSF ACF	95112	20 µg	P04141	ED ₅₀ typically less than 0.5 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of human TF1 cells.
Recombinant Human IGF-1 ACF	95119	20 µg	P05019	ED ₅₀ is typically less than 5 ng/mL. ED ₅₀ is determined by the dose-dependent proliferation of FDC-P1 cells.
Recombinant Human IL-2 ACF	95118	10 µg	P60568	ED ₅₀ is typically less than 1 ng/mL. ED ₅₀ is determined by the dose-dependent proliferation of CD3 ⁺ T cells.
Recombinant Human IL-3 ACF	95113	10 µg	P08700	ED ₅₀ typically less than 20 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of human TF-1 cells.
Recombinant Human IL-4 ACF	95114	20 µg	P05112	ED ₅₀ typically less than 0.5 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of human TF-1 cells.
Recombinant Human IL-6 ACF	95121	20 µg	P05231	ED ₅₀ is typically less than 1 ng/mL. ED ₅₀ is determined by the dose-dependent proliferation of mouse 7TD-1 cells.
Recombinant Human PDGF-BB ACF	95116	10 µg	P01127	ED ₅₀ typically less than 15 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of human 3T3 cells.
Recombinant Human SCF ACF	95115	10 µg	P21583	ED ₅₀ typically less than 10 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of human TF-1 cells.
Recombinant Human TNF-alpha ACF	95117	10 µg	P01375	ED ₅₀ is typically less than 0.8 ng/mL. ED ₅₀ is determined by the cytolysis of mouse L929 cells in the presence of Actinomycin D.
Recombinant Human TPO ACF	95110	10 µg	P40225	The ED ₅₀ is typically less than 2 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of MO7e cells.
Recombinant Human VEGF-165 ACF	95111	10 µg	P15692-4	ED ₅₀ is typically less than 5 ng/mL. ED ₅₀ is determined by dose-dependent proliferation of HUVECs.

*Custom pack sizes available on request.



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