

**CROYEZ**

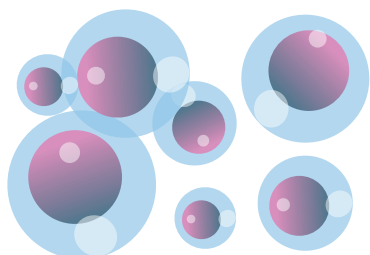
# Find the Right protein for Your Cell Models

Quick guide to choosing recombinant protein & growth factors for stem cells, immune cells, and organoid cultures.

Recombinant protein and growth factors are essential for cell growth, differentiation, and functional activation. Because each protein varies in source, activity, and stability, choosing the right one is key to achieving reliable, reproducible results. This guide highlights recommended cytokines for different cell types—helping you select the best match for your experiment quickly and confidently.

## Stem Cell

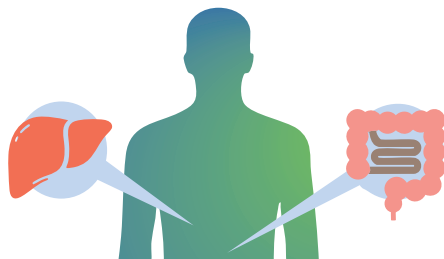
Protein support stem cell maintenance, lineage differentiation, and expansion.



Cytokine	Cat#	Species	Host
Activin A	C01193	Human, Mouse,	<i>E. coli</i> , Mouse
FGF-2/ basic FGF	C02061	Mouse	<i>E. coli</i>
BMP-2	C01062	Human	<i>E. coli</i>
BMP-4	C01064	Human, Mouse, Swine	<i>E. coli</i>
EGF	C01191	Human, Mouse	<i>E. coli</i>
Flt-3 Ligand	C01085	Human, Mouse, Swine	<i>E. coli</i>
GM-CSF	C01116	Human	<i>E. coli</i>
IL-3	C01005	Human, Mouse	<i>E. coli</i>
IL-6	C01008	Human, Mouse, Swine	<i>E. coli</i>
Noggin	C01194	Human, Mouse	HEK293 Cells
SCF	C01177	Human	<i>E. coli</i>
TGF beta 1	C01198	Human, Mouse, Swine	<i>E. coli</i>
VEGF 165	C01125	Human, Mouse	<i>E. coli</i>

## Organoid

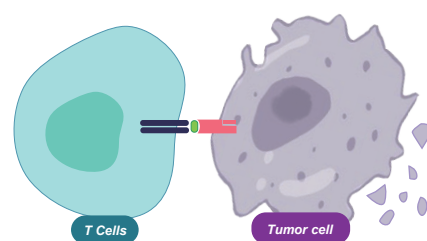
Used to establish and maintain complex organoid cultures, enabling tissue modeling.



Cytokine	Cat#	Species	Host
Activin A	C01193	Human, Mouse	<i>E. coli</i> , CHO
FGF-2/ basic FGF	C02061	Mouse	<i>E. coli</i>
BMP-2	C01062	Human	<i>E. coli</i>
BMP-4	C01064	Human, Mouse, Swine	<i>E. coli</i>
EGF	C01191	Human, Mouse	<i>E. coli</i>
FGF-4	C01094	Human	<i>E. coli</i>
FGF-10	C01100	Human	<i>E. coli</i>
HGF	C01197	Human	HEK293 Cells
IGF-I	C01114	Human, Mouse, Swine	<i>E. coli</i>
Noggin	C01194	Human, Mouse	HEK293 Cells
R-Spondin 1	C01184	Human	HEK293 Cells
TGF beta 1	C01198	Human, Mouse, Swine	<i>E. coli</i>

## Immune Cell

Essential for activating, expanding, and differentiating immune cells.



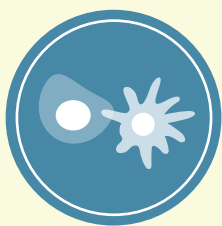
Cytokine	Cat#	Species	Host
IL-1 beta	C01002	Human, Mouse, Swine	<i>E. coli</i>
IL-2	C01004	Human, Mouse, Swine	<i>E. coli</i>
IL-4	C01006	Human, Mouse, Swine	<i>E. coli</i>
IL-7	C01009	Human, Mouse	<i>E. coli</i>
IL-12 p35	C01014	Human, Mouse	<i>E. coli</i>
IL-12 p40	C01015	Human, Mouse	<i>E. coli</i>
IL-12 p70	C01178	Human, Mouse	<i>E. coli</i> , HEK293 Cells
IL-15	C01017	Human, Mouse, Swine	<i>E. coli</i>
IL-21	C01026	Human, Mouse	<i>E. coli</i>
GM-CSF	C01116	Human	<i>E. coli</i>
IFN gamma	C01080	Human, Mouse, Swine	<i>E. coli</i>
TGF beta 1	C01198	Human, Mouse, Swine	<i>E. coli</i>
TNF-alpha	C01202	Human, Mouse, Swine	HEK293 Cells

## Advantage



### High Purity & Reliable Activity

GMP-like quality ensures consistent protein performance across cell models.



### Wide Selection Across Cell Types

Covering immune cells, stem cells, and organoids with human/mouse versions.



### Traceable & Tested Recombinant Proteins

Each protein is produced in *E. coli* or HEK293 with strict quality control.

## Q1. How do protein source and expression host affect experimental performance?



Protein expressed in *E. coli* are suitable for routine studies due to high yield and cost efficiency, while mammalian-expressed protein (e.g., HEK293) offer more native folding and post-translational modifications, which can significantly improve bioactivity in sensitive cell types. Selecting the right combination helps ensure consistent signaling and reduces variability.

## Q2. Why are stability and batch-to-batch consistency important for protein?

Even minor variations in protein purity or potency can alter cell behavior, especially in stem cell differentiation or immune cell activation. High-consistency protein minimize experimental noise, help maintain reproducibility across long-term studies, and support regulated workflows such as GMP bioprocess development.

Visit our website for the full Protocoland Application Notes

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