

# Qkine

## Growth Factors and Cytokines

Ethical and sustainable, Qkine's animal origin-free recombinant growth factor and cytokine proteins are overexpressed in *E.coli* and tested to guarantee high levels of purity, excellent lot-to-lot consistency, and correct folding for high levels of bioactivity. All proteins are supplied lyophilized and shipped at ambient temperature, with a reconstitution solution also provided at no cost.

Qkine's large range of cost-effective and reliable proteins are manufactured at scale with full traceability. Applications include stem cell research and maintenance, physiologically relevant organoid models, organ-on-a-chip technologies, and cellular agriculture. Qkine products are used by research institutions, pharma, and biotech companies around the world.



Examples:



### Vitronectin

Vitronectin protein is widely used in stem cell culture. It provides a defined environment that supports the maintenance of pluripotency and is suitable for feeder-free culture, expansion, differentiation, and reprogramming of stem cells.

QK120-0500	500 µg
QK120-5000	5000 µg



### R-spondin 1

R-spondin 1 protein (RSPO1) is used to potentiate Wnt signaling in many organoid culture systems including intestinal and tumor (cancer) organoid culture. It is also essential for hematopoietic stem cell specification and cancer cell migration and survival.

QK006-0025	25 µg
QK006-0050	50 µg
QK006-0100	100 µg
QK006-0500	500 µg
QK006-1000	1000 µg



### Follistatin-resistant activin A (FRACTA)

Follistatin-resistant activin A (FRACTA) protein has been engineered to prevent binding to the natural inhibitor, follistatin. In vivo activin A activity is regulated by follistatin, a high-affinity inhibitor; follistatin accumulates in stem cell culture, where it inhibits activin A.

QK035-0025	25 µg
QK035-0050	50 µg
QK035-0100	100 µg
QK035-0500	500 µg
QK035-1000	1000 µg

[www.reprocell.com/product-catalog/qkine-growth-factors-and-cytokines](http://www.reprocell.com/product-catalog/qkine-growth-factors-and-cytokines)





### Stem Cell Factor (SCF)

SCF is a critical factor in the maintenance and expansion of hematopoietic stem cells (HSCs) in the bone marrow microenvironment. SCF is also a key myeloid progenitor differentiation factor cells such as megakaryocytes, basophils, neutrophils, and monocytes, and it is a primary growth and activation factor for mast cells and eosinophils.

QK078-0025	25 µg
QK078-0050	50 µg
QK078-0100	100 µg
QK078-0500	500 µg
QK078-1000	1000 µg



### Fibroblast Growth Factor 1 (FGF-1)

FGF-1 can stimulate growth and differentiation of endothelial and epithelial cells and the development of organoids. FGF-1 can also be used for the maintenance of oligodendrocytes and astroglia as well as bone marrow-derived mesenchymal and hematopoietic stem cells.

QK071-0050	50 µg
QK071-0100	100 µg
QK071-0500	500 µg
QK071-1000	1000 µg



### Fibroblast Growth Factor 2-G3 (FGF2-G3)

Recombinant FGF2-G3 (FGF2-STAB®) protein is a thermostable engineered form of FGF-2 (bFGF). FGF2-STAB, developed by Dvorak *et al.* 2018, is the 154 aa mature domain of FGF-2 with nine amino acid substitutions to enhance stability without impacting bioactivity. This increases the functional half-life of the protein from <10 h (wild-type) to >7 days.

QK053-0050	50 µg
QK053-0100	100 µg
QK053-0500	500 µg
QK053-1000	1000 µg

## Qkine's Nine-Point Quality Commitment

Every Qkine protein is:

1. Certified animal origin-free with full traceability
2. Manufactured within our ISO 9001:2015-certified facility with stringent in-process control measures
3. Rigorously tested for accurate protein recovery from vials
4. Subject to quantitative bioactivity analysis with integrated lot-to-lot reproducibility criteria
5. Proven to have industry-leading protein purity levels
6. Subject to comprehensive identity analysis for structurally complex bioactive proteins
7. Assayed to ensure industry-leading low endotoxin levels
8. Rigorously tested for sterility and mycoplasma contamination for confident use in cell-culture applications
9. From concept to manufacture, our proteins are designed to be the best



### About Qkine

An ISO 9001:2015 certified company, Qkine manufactures high-purity, animal-free growth factors and cytokines for stem cell and organoid culture, as well as biomarkers and attachment factors. They actively support emerging fields such as cellular agriculture, regenerative medicine, synthetic hydrogels, organ-on-a-chip technology, and bioprinting.

Qkine is committed to manufacturing bioactive proteins of the highest quality to enhance scientific outcomes and improve reproducibility.