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Mesoderm differentiation kit (Qk514)

Type: Growth factor discovery kits

Available for purchase: Qk514: Mesoderm differentiation kit

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Product Information

For validating the ability of new or established induced pluripotent stem (iPSC) lines to differentiate into the mesoderm lineage.

The mesoderm differentiation kit is designed to validate the differentiation potential of both newly derived and established iPSC lines. This kit enables the evaluation of the ability of iPSCs to differentiate into the Mesoderm linage, one of the three primary germ layers responsible for generating muscle, bone, blood, and connective tissues.

The kit includes carefully optimized growth factors and extracellular matrix components required to efficiently guide iPSCs toward the mesoderm lineage. It serves as both an endpoint assay, confirming pluripotency and lineage commitment, and a platform for generating mesoderm-derived cells for further downstream applications.

Each kit is sufficient for differentiation of 8x 96 well plates.

Species reactivity

- human

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Animal origin-free (AOF) and carrier protein-free
- Expressed in *E. coli*
- Bioactivity Guaranteed

- Manufactured in our Cambridge, UK laboratories
- Lyophilized

Reconstitution instructions

- Discovery kits

Featured applications

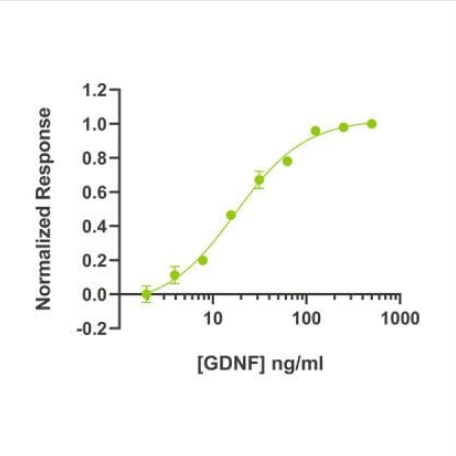
- iPSC-derived mesoderm differentiation

Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

Bioactivity



Human activin A - Qk001 - **25 µg**

Frequently used to maintain pluripotency in induced pluripotent and embryonic stem cell cultures. It is also used in many stem cell differentiation protocols, including endoderm lineage differentiation and further maturation into hepatocyte and pancreatic cells.

Human BMP-4 - Qk038 - **25 µg**

A key regulator of embryogenesis and supports the differentiation of embryonic stem cells and induced pluripotent stem cells.

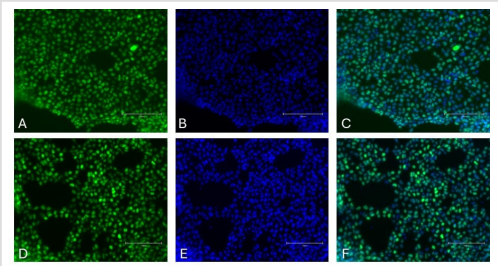
Human FGF2-G3 (154 aa) – Qk053 - **50 µg**

A thermostable engineered form of human FGF-2. Human FGF2-G3 154 aa is the 154 aa mature domain of FGF-2. The functional half-life has increased from <10 h (wild-type) to >7 days (FGF2-G3).

Human vitronectin – Qk120 - **500 µg**

Provides a defined environment that supports the maintenance of pluripotency and is suitable for feeder-free culture, expansion, differentiation, and reprogramming of stem cells.

Purity



Immunocytochemistry of Mesoderm markers in differentiated iPSCs. Transcription factor Brachyury [Green, A], Hoechst 33258 [Blue, B], combined Brachyury and Hoechst [C] and transcription factor MIXL1 [Green, D], Hoechst33258 [Blue, E], combined MIXL1 and Hoechst [F]. Images were acquired using the EVOS M5000 (scale bar = 150 µm). iPSC differentiated using the mesoderm differentiation kit (Qk514).

Application note | Differentiation of induced pluripotent stem cells (iPSCs) into mesoderm

Original product page: https://qkine.com/product/mesoderm-differentiation-kit-qk514/

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