

Recombinant human follistatin-resistant activin A (FRACTA) protein (Qk035)



Type: Stem cells

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

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 follistatin-resistant activin A (FRACTA) has equivalent bioactivity to wild-type [activin A \(Qk001\)](#) but does not bind follistatin so is resistant to feedback inhibition. High purity 26 kDa dimer comprising engineered mature domain of activin A protein, [animal origin-free](#) (AOF) and carrier-protein free (CF). This specialized activin A has been developed in [Marko Hyvönen's group in the University of Cambridge](#).

This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email ryan.weber@matriq.com.

Alternative protein names

ActA, Activin beta-A chain, Erythroid differentiation protein (EDP), Follicle-Stimulating Hormone (FSH) releasing protein (FRP), INHBA, Inhibin beta A, Inhibin beta 1, Qk35

Molecular weight

26 kDa (dimer)

Protein Uniprot number

High purity engineered follistatin-resistant activin A (FRACTA) protein

Species reactivity

- human
- species similarity:
- mouse - 98%
- rat - 98%
- bovine - 98%
- porcine - 98%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

Featured applications

- Induced pluripotent and embryonic stem cell differentiation and maintenance

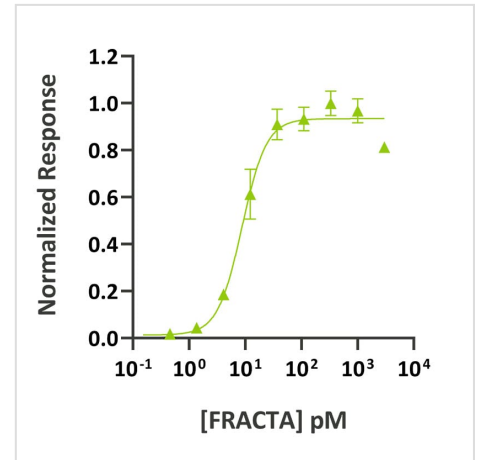
Further quality assays

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

Scientific Information

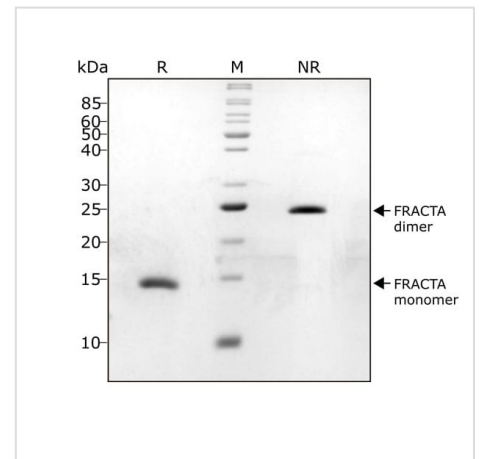
Bioactivity

Follistatin-resistant activin A (FRACTA) activity was determined using the activin-responsive firefly luciferase reporter assay in transiently transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of FRACTA. Firefly luciferase activity was measured and normalized. EC50 = 0.23 ng/ml (8.8 pM).



Purity

FRACTA migrates as a single band at 24 kDa in non-reducing (NR) and 13 kDa as a single monomeric species upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein (1 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250. Data from Qk035 lot #104287.



Original product page: <https://ryan.calliope-alpha.ts.net/product/recombinant-human-follistatin-resistant-activin-a-protein-qk035/>

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