

Catalog No.: RP01618SLQ **Recombinant**

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human | | |

Tags

C-hFc

Synonyms

WNT3A:Protein Wnt-3a;Wnt3a Surrogate

| | |
|-------------------------------|--|
| Source HEK293 Cells | Purification ≥ 95 % as determined by SDS- PAGE; ≥ 95% as determined by HPLC. |
|-------------------------------|--|

| Calculated MW | Observed MW |
|---------------|-------------|
| 67.52 kDa | 66-75 kDa |

Endotoxin

< 0.01 EU/μg of the protein by LAL method

Formulation

Lyophilized from sterile 0.22 μ m filtered solution in PBS buffer with Trehalose, Glycerol, and Tween80, pH 7.4.

Reconstitution

Contact

 | 400-999-6126

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Wnt3a Surrogate protein is a Wnt recombination protein that plays an important role in embryonic development, adult tissue homeostasis and injury repair. Wnt3a Surrogate protein, consisting of the domain and Fc portion of Wnt3a, helps organoids expand and maintain a source of Wnt. Organoids are a rapidly evolving model system for tissue development, and Wnt3a is considered as the essential protein for organoid growth. Wnt3a or the small molecule glycogen synthase kinase 3 (GSK3) inhibitor CHIR are commonly used as Wnt sources in experiments. However, the application of Wnt3a is hampered by Wnt lipidation, and cross-reactivity with Wnt frizzled (Fzd). Therefore, Wnt3a Surrogate protein was used instead of Wnt3a, as a water-soluble and Fzd-specific alternative Wnt agonist.

Description

Recombinant Human Wnt-3a Surrogate Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence of Human Wnt-3a Surrogate fused with hFC at the C-terminus.

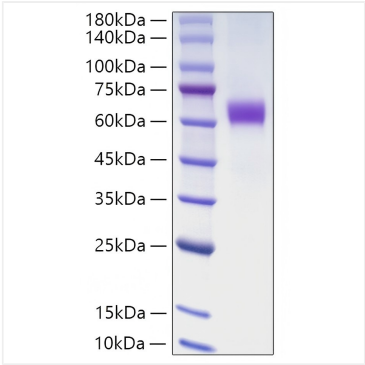
Bio-Activity

1 Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 7.38–29.54 ng/mL, corresponding to a specific activity of $3.39 \times 10^4 \sim 1.35 \times 10^5$ units/mg.

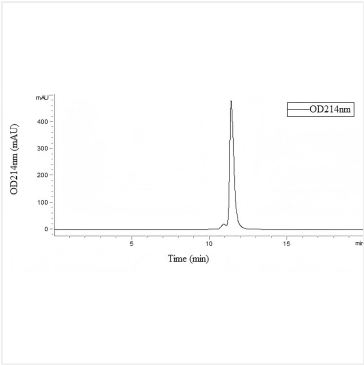
Storage

Store at -70°C. This product is stable at $\leq -70^{\circ}\text{C}$ for up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze-thaw cycles.

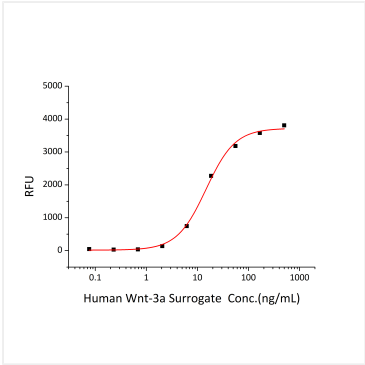
Validation Data



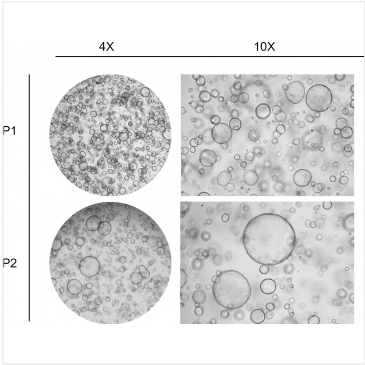
Recombinant Human Wnt-3a Surrogate Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



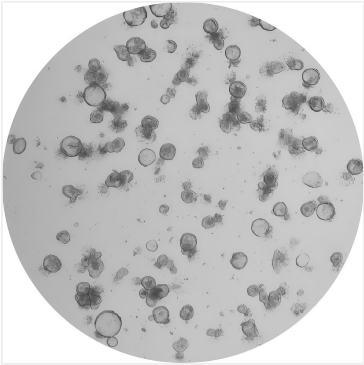
Recombinant Human Wnt-3a Surrogate Protein is greater than 95% as determined by SEC-HPLC.



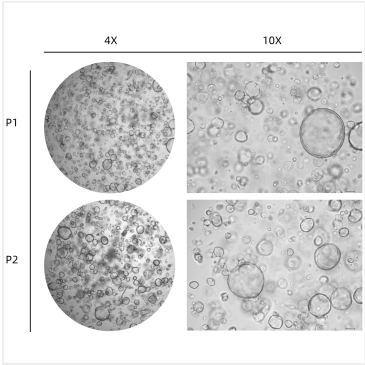
Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 7.38-29.54 ng/mL ,corresponding to a specific activity of 3.39×10⁴~1.35×10⁵ units/mg.



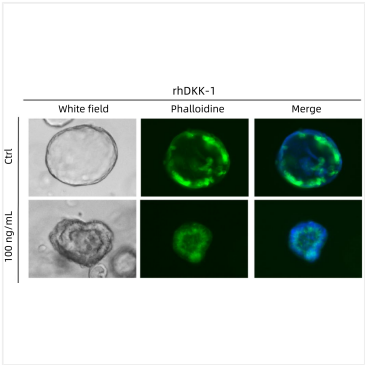
Human stomach organoids organoids were cultured with EGF(Cat. RP03287), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSP01(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



Mouse large intestinal organoids were cultured with EGF(Cat. RP03287), NOG(Cat. RP01237), RSP01(Cat. RP00071), WNT-3a(Cat. RP01618SLQ)



Human liver organoids were cultured with EGF(Cat. RP03287), HGF(Cat. RP01602), FGF2(Cat. RP01042), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSP01(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



Human kidney organoids were cultured with EGF(Cat. RP03287), FGF2(Cat. RP01042), FGF7(Cat. RP01717), FGF9(Cat. RP01710), FGF10(Cat. RP01140), IGF-(Cat. RP00996), NOG(Cat. RP01237), RSP01(Cat. RP00071), WNT-3a(Cat. RP01618SLQ). And further, DKK-1(RP01343) was used to induce the establishment of cell polarity.