

Recombinant Human Wnt-3a Surrogate Protein

Catalog No.: RP01618SLQ Recombinant

Sequence Information

Species **Gene ID** **Swiss Prot**
 Human

Tags
 C-hFc

Synonyms
 WNT3A;Protein Wnt-3a;Wnt3a Surrogate

Background

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.

Product Information

Source **Purification**
 HEK293 Cells $\geq 95\%$ as determined by SDS-PAGE; $\geq 95\%$ as determined by HPLC.

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

Endotoxin
 < 0.01 EU/ μ g 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

Basic Information

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

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 3.39×10^4 – 1.35×10^5 units/mg.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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. Avoid repeated freeze/thaw cycles.

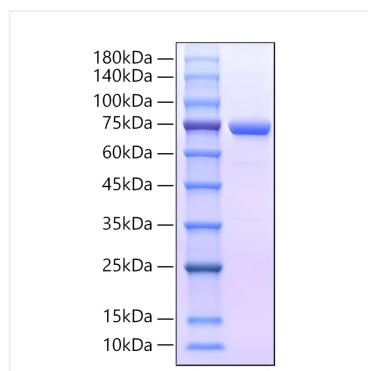
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

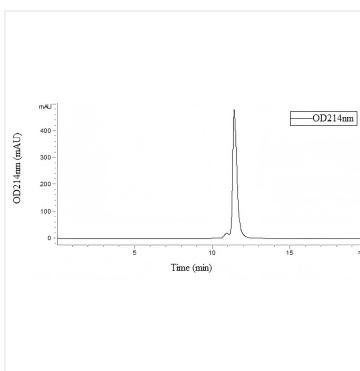
Contact

	400-999-6126
	cn.market@abclonal.com.cn
	www.abclonal.com.cn

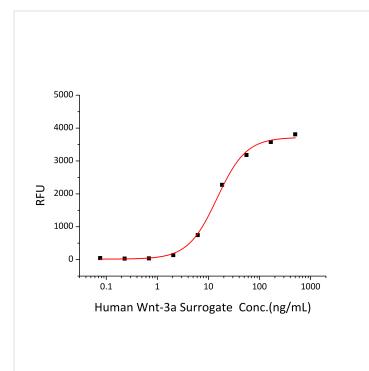
Validation Data



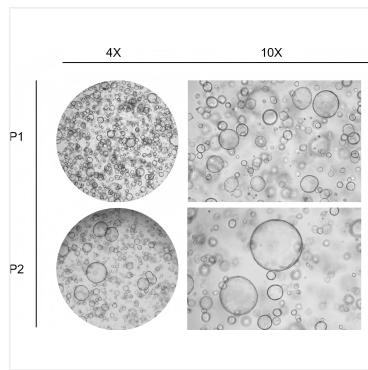
Recombinant Human Wnt-3a Surrogate Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



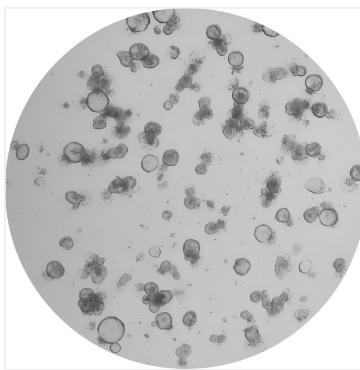
Recombinant Human Wnt-3a Surrogate Protein is greater than 95% as determined by SEC-HPLC.



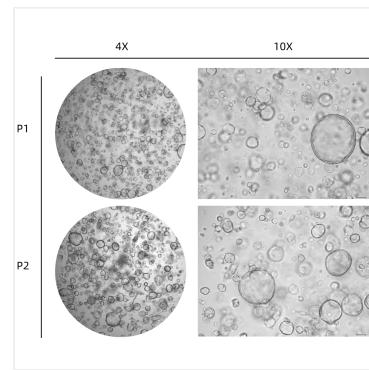
Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 7.38-29.54 ng/ml, corresponding to a specific activity of $3.39 \times 10^4 \sim 1.35 \times 10^5$ units/mg.



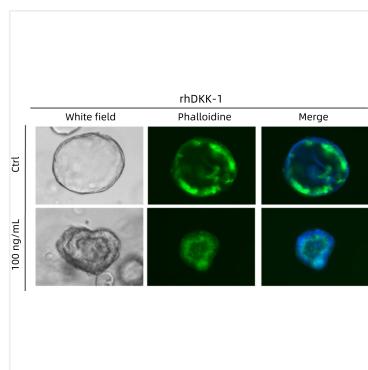
Human stomach organoids organoids were cultured with EGF(Cat. RP03287), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



Mouse large intestinal organoids were cultured with EGF(Cat. RP03287), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ)



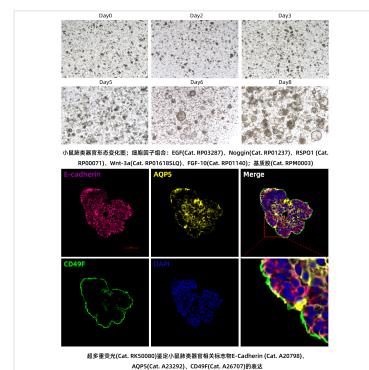
Human liver organoids were cultured with EGF(Cat. RP03287), HGF(Cat. RP01602), FGF2(Cat. RP01042), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



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), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ). And further, DKK-1(RP01343) was used to induce the establishment of cell polarity.



Human gastric cancer organoid were cultured with EGF(Cat. RP03287), NOG(Cat. RP01237), FGF10(Cat. RP01140), RSPO1(Cat. RP00071), Wnt-3a Surrogate(Cat. RP01618SLQ), A83-01(Cat. RPM0008), Y-27632 dihydrochloride(Cat.RPM0007), Gastrin I(Cat. RPM0011), AB-27 Supplement(Cat. RPM0047LQ), N-2 Supplement(Cat. RPM0046LQ).



Mouse lung organoids were cultured in Matrigel (Cat. RPM0003) with medium supplemented with EGF (Cat. RP03287), Noggin (Cat. RP01237), RSPO1 (Cat. RP00071), Wnt-3a (Cat. RP01618SLQ), and FGF-10 (Cat. RP01140). After 8 days of culture, the expression of lineage markers, including E-Cadherin (Cat. A20798), AQP5 (Cat. A23292), and CD49F (Cat. A26707), was assessed by ultra-plex immunofluorescence staining.