Recombinant Human Wnt-3a Surrogate Protein

Catalog No.: RP01618SLQ

Sequence Information

Species
Human

Gene ID

Swiss Prot

Tags
C-hFc

Synonyms
WNT3A,Protein Wnt-3a,Wnt3a Surrogate

Product Information

Source
HEK293 Cells

Purification
≥ 95 % as determined by SDS-PAGE;≥ 95% as determined by HPLC.

Calculated MW
67.52 kDa

Observed MW
66-75 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL method

Formulation
Supplied as 0.22 μm filtered solution in PBS buffer with Trehalose, Glycerol, and Tween80, pH 7.4.

Reconstitution

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.

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.

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 3.39×10^{4}~1.35×10^{5} units/mg.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -70℃

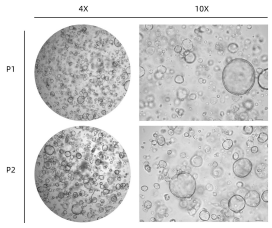
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

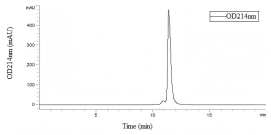
400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

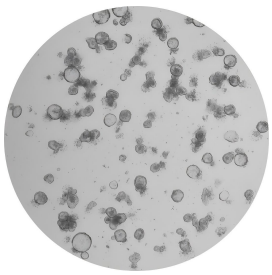
Validation Data



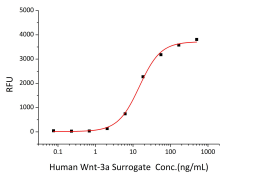
Human liver organoids were cultured with EGF(Cat. RP03287), HGF(Cat. RP01602), FGF2(Cat. RP01042), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



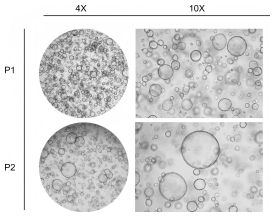
Recombinant Human Wnt-3a Surrogate Protein is greater than 95% as determined by SEC-HPLC.



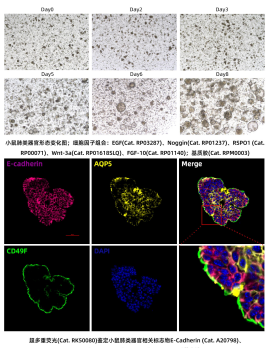
Mouse large intestinal organoids were cultured with EGF(Cat. RP03287), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ)



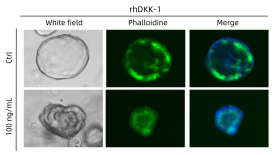
Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 7.38-29.54 ng/mL ,corresponding to a specific activity of 3.39×10^4~1.35×10^5 units/mg.



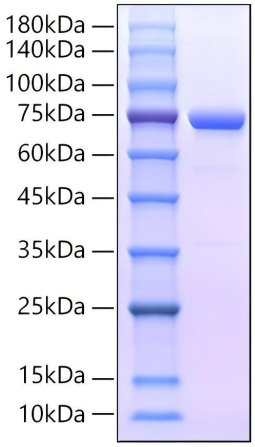
Human stomach organoids organoids were cultured with EGF(Cat. RP03287), FGF10 (Cat. RP01140), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



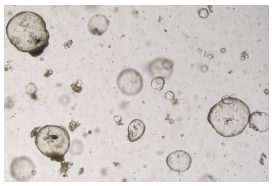
Mouse lung organoids were cultured in Matrigel (Cat. RPM0003) with medium supplemented with EGF (Cat. RP03287), Noggin (Cat. RP01237), RSPO1 (Cat. RP00071), Wnt-3a (Cat. RP01618SLQ), and FGF-10 (Cat. RP01140). After 8 days of culture, the expression of lineage markers, including E-Cadherin (Cat. A20798),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



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.



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



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).