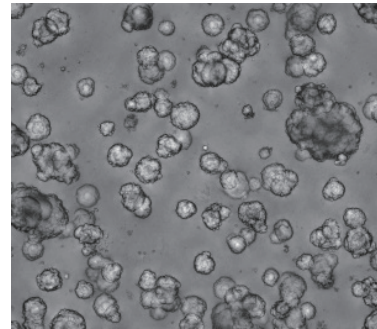


Afamin/Wnt3a CM

for Organoid culture

- Serum Free
- Stabilized Wnt3a
- High Activity



Wnt signaling is known to be involved in early development, maintenance and regeneration of stem cells, and in cancer formation. Wnt signaling has also been found to play an important role in the growth and maintenance of these processes. In particular, Wnt3a has been revealed to be an essential niche component for maintaining the proliferation of Lgr5-positive stem cells in intestinal epithelial cells and is used for the production of various digestive organoids such as the small intestine, large intestine, stomach, pancreas and liver. Although Wnt3a has been conventionally used for the culture of gut organoids, it is a fat-soluble protein, so it forms aggregates in serum-free medium and can not exert its activity sufficiently. In 2016, Mihara *et al.* found that high Wnt3a activity can be maintained by forming a complex with Wnt3a by Afamin (AFM), which is one of the components of serum (Figure 2A). In addition, by using Afamin and Wnt3a complex for organoid culture, long-term culture of organoid becomes possible (Figure 2B). This new medium will result in optimal success for your organoid experiments.

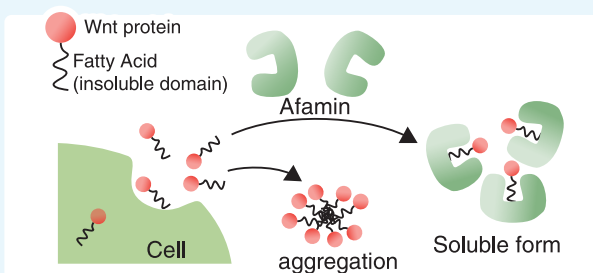


Figure 1: Mechanism of Wnt3a stabilization by Afamin proteins

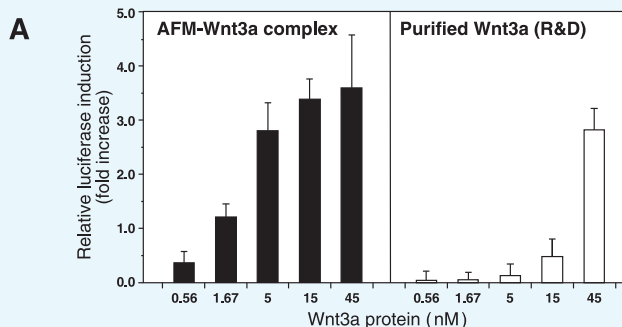
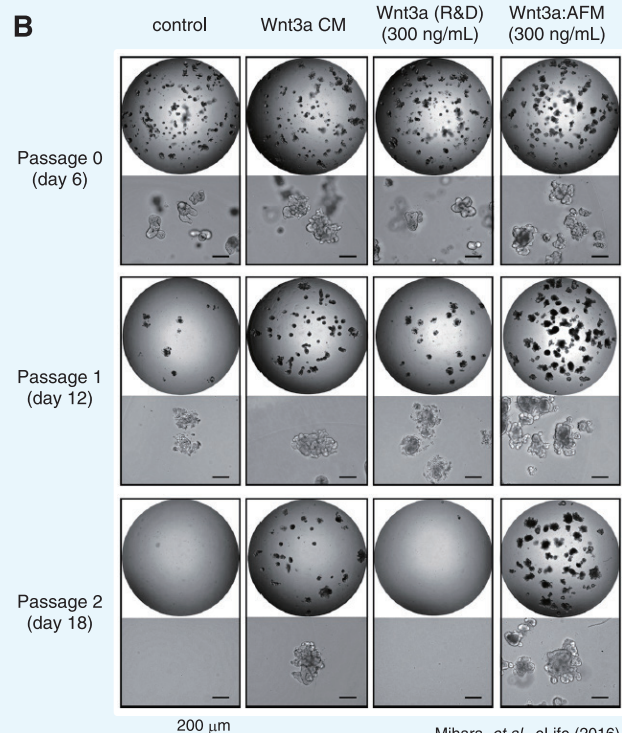
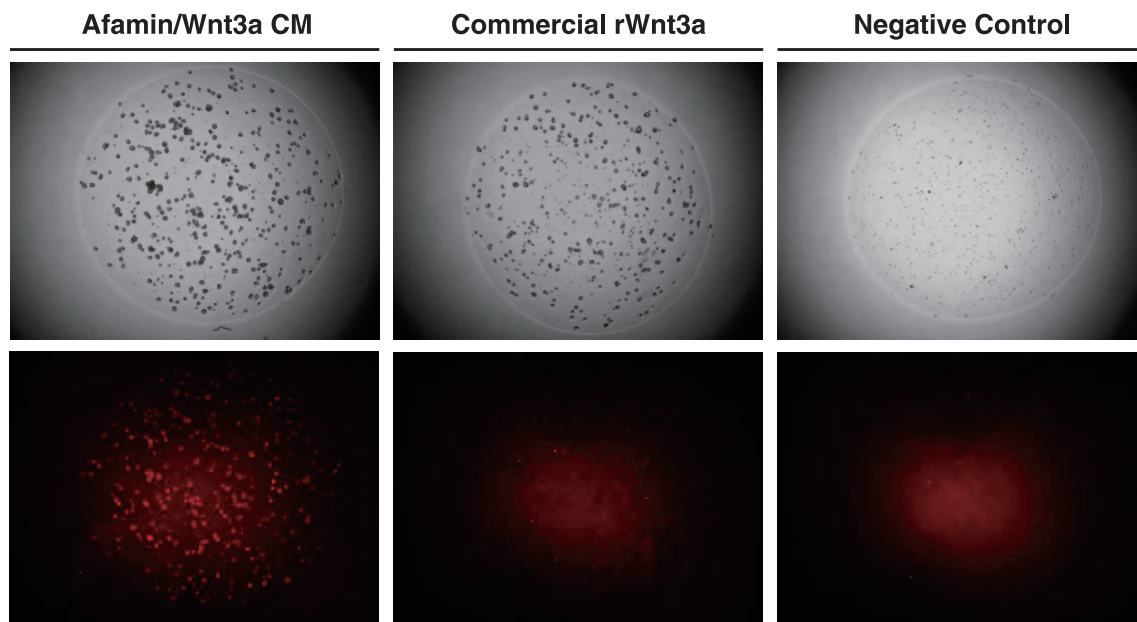


Figure 2: Wnt3a in complex with AFM is biologically active.


200 μ m

Mihara, *et al.*, eLife (2016)

Afamin/Wnt3a CM increased LGR5 Positive Stem Cells Expressed tdTomato



This data obtained from collaboration with Dr. Sato, Keio Univ.

Images on the top panels show a bright field of human color organoids. Images on the bottom panels show fluorescent LGR5 positive stem cells that express tdTomato regulated by Lgr5 promoter. Afamin/Wnt3a CM maintained LGR5 positive stem cell growth is seen at greater levels compared with cell growth in purified Wnt3a (300 ng/mL).

Product Highlight

Code No.	Product Name	Main Components	Size	Solvent
J2-001	Afamin/Wnt3a CM	Mouse Wnt3a Human Afamin	10 mL	Advanced D-MEM/F-12

Related Product: Recombinant Afamin/Wnt3a

Recombinant Afamin/Wnt3a was purified from the culture supernatant of CHO-K1 cells co-expressing Afamin and Wnt3a.

Code No.	Product Name	Main Components	Size	Solvent
J2-002	Recombinant Afamin/Wnt3a	Mouse Wnt3a Human Afamin	60 µg/300 µL	20 mM Tris-HCl (pH 7.4), 150 mM NaCl

When culturing organoids, stem cells, or other tissues, if you are to use this product in combination with other factor or factors (hereunder factors), a third party may have a patent on the use or other application of the factors concerned. Regarding to this product, we do not offer any non-infringement warranty when used or otherwise applied in combination with other factors. Therefore, if you intend to use this product in combination with other factors, please check with your organization's division responsible for intellectual property rights or your research agency before using this product.

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For research use only. Not for use in diagnostic or therapeutic procedures.
The information is as of October 2023. Please contact us for the latest information. Please read the data sheets carefully before use.
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