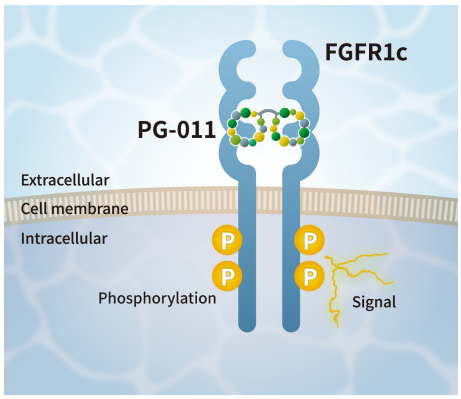
New Product

PeptiGrowth

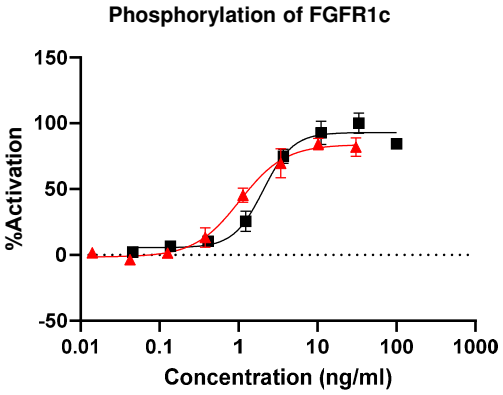
PG-011:FGF2 Alternative Peptide *(FGFR1c agonist)*

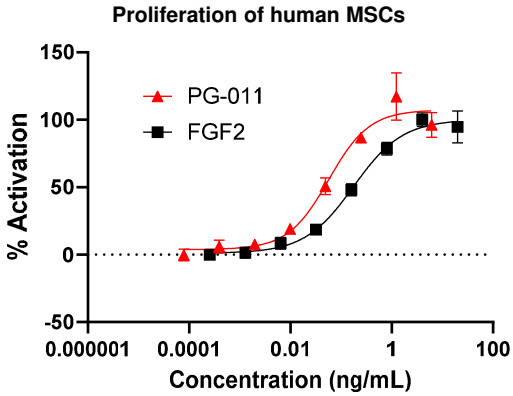
Product Information

Mode of Action



Activity Evaluation Data



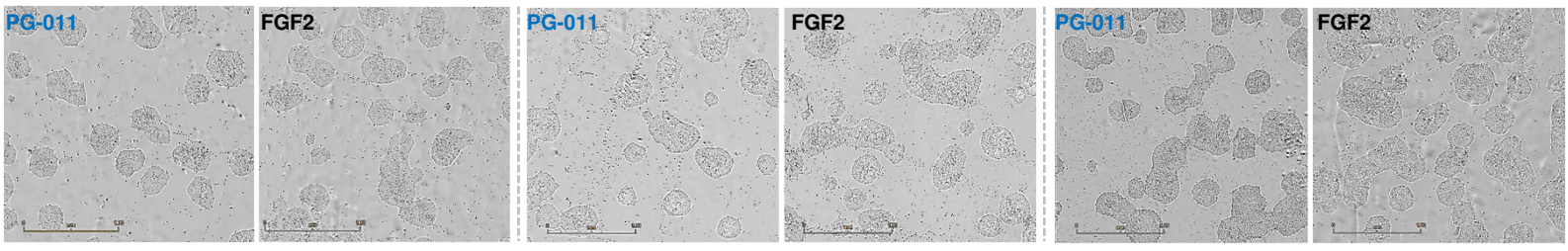


- FGF2 alternative peptide (PG-011) is a dimeric peptide composed of cyclic peptides that bind to human FGFR1c. PG-011 exhibits agonist activity toward FGFR1c by binding to it, thereby activating signaling pathways in various types of cells.
- PG-011 demonstrated comparable FGFR1c phosphorylation activity.
- PG-011 induced proliferation of human MSCs to FGF2 at approximately **1/3 of the conc.**

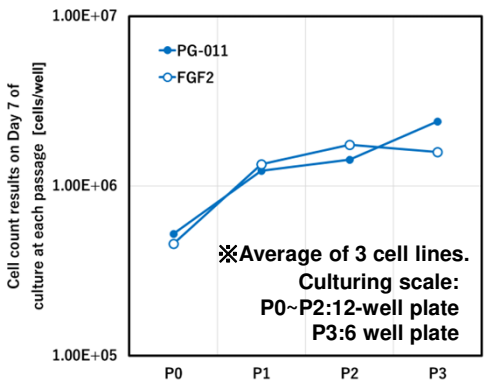
Undifferentiated Maintenance Ability of Human iPSCs

The undifferentiated maintenance ability of PG-011 and FGF2 in human iPSCs was evaluated. FGF2 (100 ng/mL, ~5.9 nM) or PG-011 (5.9 nM, 30 ng/mL) was added to the culture medium. After 7 days of culturing, passaging was performed. Three passages were conducted, and the positive rate of undifferentiated markers in iPSCs on Day 7 of Passage 3 (P3) was assessed.

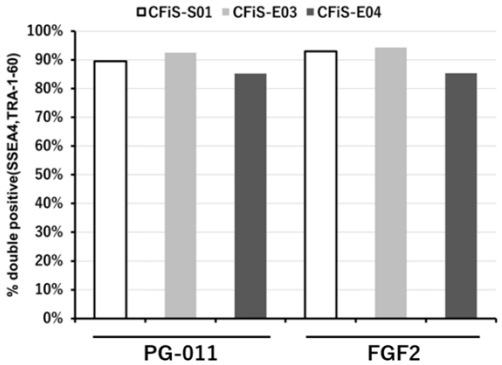
Morphologies of iPSCs at P3



Cell numbers at each passage



Undifferentiated marker measurements



- iPSCs cultured with PG-011 and FGF2 exhibited similar colony morphology.
- Cell numbers at each passage were similar, confirming that **PG-011 has comparable proliferation capability to FGF2**.
- iPSCs cultured with **PG-011 showed comparable levels of undifferentiated marker positivity** on Day 7 of Passage 3 to those cultured with FGF2.

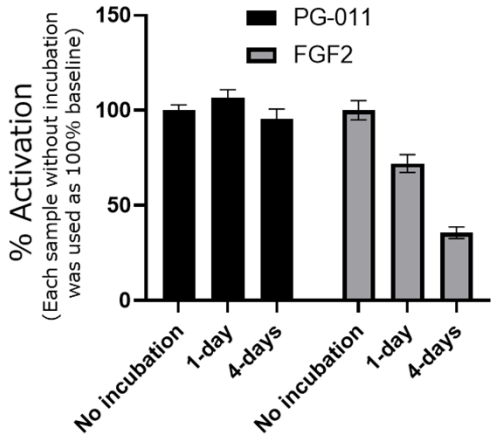
These data were obtained by Dr. Tsukahara and Dr. Ueda at CiRA Foundation, Kyoto University.

Stability at 37°C and During Cell Culturing Conditions

1) Stability at 37°C

Procedure

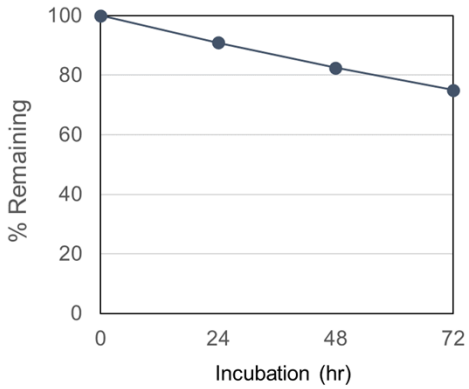
1. Incubate FGF2 or PG-011 in medium at 37°C for 1 or 4 days
2. After incubation, measure the activity on MSC proliferation.



2) Stability during cell culturing.

Procedure

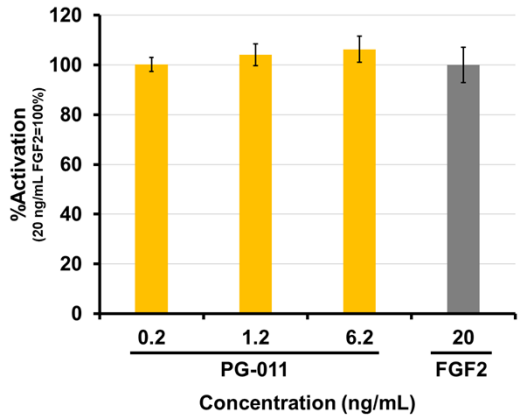
1. The PG-011was incubated with HULEC cells at 37°C.
2. The concentration of PG-011 in the media was measured at 24, 48 and 72 hours.



- While FGF2 showed a decrease in activity with increased incubation time at 37°C, **PG-011 maintained its activity**.
  → Confirming that **PG-011 has superior stability compared to recombinant FGF2**.
- PG-011 **retained nearly 80% of its activity after 3 days of incubation at 37°C in the presence of HULEC cells**
  → Demonstrating its high stability under actual culturing conditions.

Cross-Reactivity with Bovine Cells

FGF2 is a growth factor with high demand in the cultivated meat industry. To evaluate the cross-reactivity of PG-011 beyond human cells, we assessed its proliferation activity in bovine muscle satellite cells.



- PG-011 exhibited **proliferation activity in bovine muscle satellite cells**.
  →Suggesting **its potential utility in cultivated meat applications**.

Product Overview

Formulation	: Lyophilized
Storage Condition	: -20℃
Purity	: ≧95% (HPLC)
Molecular Weight	: 5127.81(acetate)
Product Size	: 10 µg/vial(sample only), 50 µg /vial

Free Sample Request Form

Free Samples Available!

We offer free samples of all our products for testing. Please access the sample request form by scanning the QR code on the right.

Contact Information

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