

September 5, 2023

PeptiGrowth Inc.

PeptiGrowth Inc. is Launching a Novel Synthetic Peptide VEGF-alternative peptide (VEGFR2 agonist)

PeptiGrowth Inc. (Headquarters: Chiyoda-ku, Tokyo, President: Jiro Sugimoto) has successfully developed a novel synthetic peptide called “VEGF alternative peptide (VEGFR2 agonist)” which has equivalent function to recombinant VEGF (Vascular Endothelial Growth Factor). This product will be on the market at the end of September 2023.

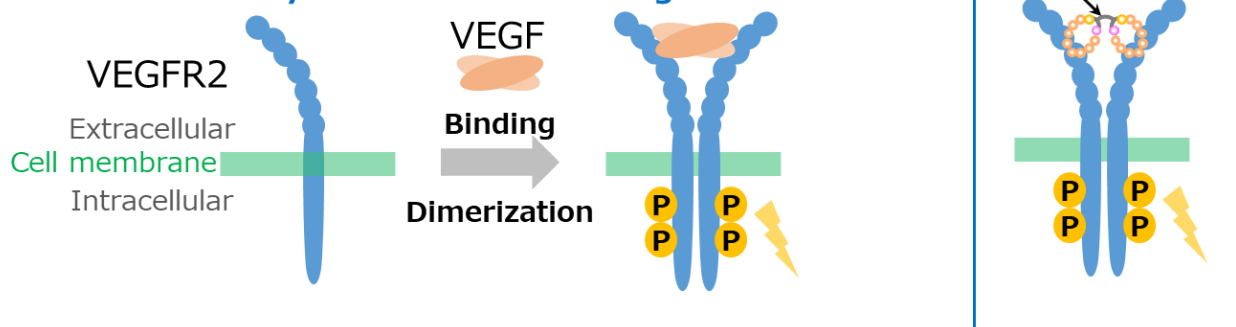
Development of Synthetic Peptide Growth Factors by PeptiGrowth

Conventional growth factors and cytokines used in the manufacturing of regenerative medicine and cell therapy products face various quality challenges such as lot-to-lot variation, potential contamination with biological impurities, low stability, and high cost. PeptiGrowth has been working on the development of a series of synthetic peptides that can address these challenges while maintaining equivalent function to the conventional growth factors and cytokines in the market. Our peptides are completely chemically synthesized and animal component-free, enabling Xeno-free and chemically defined cell culture media.

About VEGF alternative peptide (VEGFR2 agonist) [Product code: PG-007]

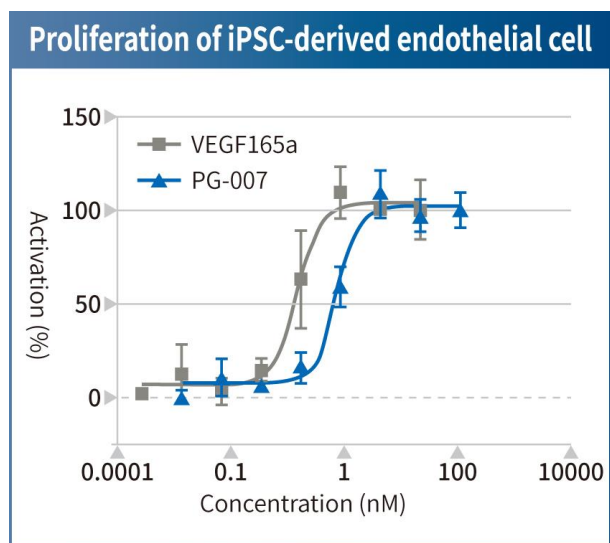
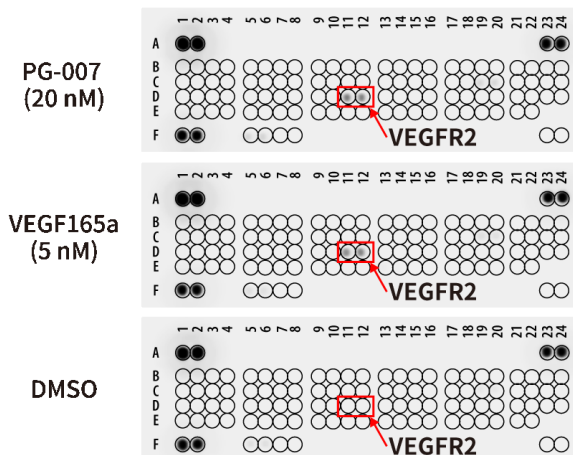
- Mechanism of activating VEGFR2 by the VEGF alternative peptide (PG-007).

PG-007 exerts its biological activity by binding to VEGFR2 similarly to VEGF and inducing dimerization



- Receptor activation profile and cell proliferation similar to recombinant VEGF

VEGFR2 phosphorylation (phospho-RTK array)



We performed a functional comparison test between our VEGF alternative peptide (VEGFR2 agonist) and commercially available recombinant VEGF165a by measuring phosphorylation of multiple receptor tyrosine kinases. The results showed that the VEGF-alternative peptide has the same ability to phosphorylate VEGFR2 as VEGF165a (left). We also evaluated its ability to proliferate iPS cell-derived endothelial cells. We observed that the VEGF-alternative peptide has cell proliferation-promoting abilities like that of VEGF165a (right).

During the induction of differentiation of iPS cells into vascular endothelial cells, we have confirmed that the activity of our VEGF alternative peptide is equivalent to that of VEGF (data in preparation for release). Use of our VEGF alternative peptide can include regenerative medicine and cell therapy applications using cardiomyocytes, endothelial cells and hematopoietic stem cells derived from iPS cells, which have been the focus of much research and development in recent years.

- Product Overview

Product name: VEGF alternative peptide (VEGFR2 agonist)
 Product Code: PG-007
 Product form: Lyophilized
 Storage conditions: -20°C or less
 Purity: ≥95% by HPLC
 Molecular weight: 4785.32
 Size: 5 µg (volume per a glass vial)

*This product can be provided with an Animal Component Free (ACF) certificate.

*This product is for testing and research use only (RUO).

*There is a possibility that the specification would be changed.



➤ Purchase Our Product

If you would like to purchase our products, please contact us at the information below.

For customers who would like to purchase GMP compliant products as well as the above PG products in bulk scale, please contact us using the information provided below.

Development of other peptides from PeptiGrowth

We have developed alternative peptides targeting numerous growth factors and cytokines. To date, we have launched seven products and we plan to launch several growth factor alternative peptides targeting Wnt3a, PDGF-AA, TPO, FGF2, etc. from the end of 2023 to early 2024. Details will be updated on our website. If you are interested, please contact us at the following Contact Information.

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