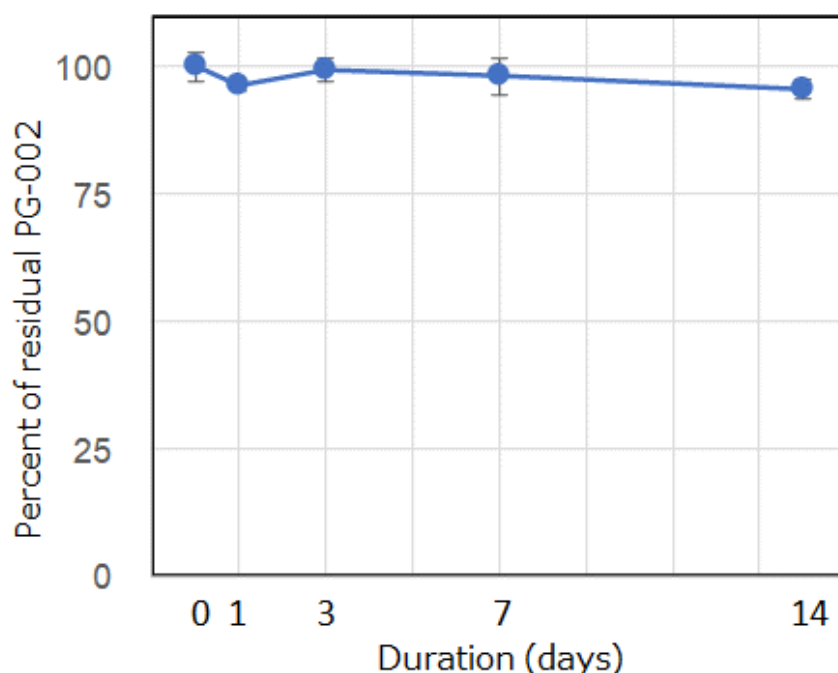


TGF β 1 Inhibitory Peptide [Product ID: PG-002] Stability in cell culture medium for a period of 14 days

Transforming growth factor β 1 (TGF β 1) inhibitor peptide, the investigational use peptide reagent of PeptiGrowth' product is designed to inhibit TGF β 1 present in cell culture supernatant. It exhibits a cyclic monomer structure, structurally stable and expected to persist as undegraded in general liquid media [1]. In general, epithelial-mesenchymal transition (EMT) is known to be induced by TGF β -mediated inflammation [2]. Therefore, it has been reported that differentiation of several stem cells into mesenchymal cells may be suppressed by inhibiting TGF β [3].

At this experiment, time-dependent changes of TGF β 1 inhibitor peptide "PG-002" concentrations **in a liquid medium under standard cell culture conditions (at 37°C) were determined, demonstrating the PG-002 concentration was apparently maintained as over 80% even after 2 weeks (see below).**

Changes in PG-002 concentration (initial value set as 100%)



- Method: PG-002 (final concentration: 100 nM) was added into the liquid medium (commercially available DMEM/F-12) and **maintained at 37° C for 14 days**. Relative concentrations of PG-002 were measured by LC/MS system at several points (at 0, 1, 3, 7, and 14 days).

- Result: Concentrations were shown as **maintained at 80% or higher even after 14 days under normal cell culture conditions** (N=3, mean \pm SD, in the upper graph).
- References:
 - 1) Nature Portfolio 2022.
[A growing market for synthetically produced peptides \(nature.com\)](https://www.nature.com/articles/d41586-022-00000-0)
 - 2) Xu J, *et al.* Cell Res. 2009; 19: 156-172.
 - 3) Mizuno S, *et al.* Biol Pharm Bull. 2024; 47: 120-129.
- Precautions regarding the product:
 - Please read the Safety Data Sheet (SDS) carefully prior to use the product.
 - To use this product immediately after dissolving is recommended.
 - This product is a reagent for research use only. Not to use for any purpose other than research or investigational use.
 - Specifications, contents, appearances, etc. of this product may be changed without notice.
 - Contact us or our sales agents, if with any large amounts or other special specification.

《Contact regarding PeptiGrowth's products and application notes》

Official Distributor for North America

Iwai North America Inc.



PeptiGrowth Inc. Tokyo, JAPAN, TEL : +81-(0)70-4503-1497, E-mail : contact@peptigrowth.com