FAQ

How to Use

Q: What solvent should be used to dissolve the PG peptides? Is it soluble in anything other than DMSO?
A: They are soluble in general media, but at ultra-trace levels (e.g., 2 µg), the peptide may adhere to containers or pipette tips. DMSO is recommended for solubilization.

Properties

Q: How stable is PG peptide in the medium compared to conventional growth factors?
A: All PG peptides remain stable in advanced DMEM/F12 medium (without serum) at 37 °C for at least one week.

Q: What is the degree of residuals in the cell and in the final product?
A: PG peptides don't directly enter cells, so residual levels are expected to drop below detection after washing. However, endocytosis-bound peptides may persist. Residual levels depend on usage and washing conditions; PeptiGrowth offers ultra-sensitive MS assays to measure residuals.

Q: Do PG peptides have toxicity?
A: In vitro assays show no toxicity up to 10 µM—over 1,000 times higher than active concentrations. Non-toxic under normal use.

Q: What are the stability and storage conditions of PG peptides?
A: Store at –20 °C. Shelf life is 2 years, with data suggesting stability at higher temperatures and extended times. Studies on stability in culture media are underway.

Q: What is the endotoxin content of PG peptides for research use only?
A: Endotoxin testing isn't performed on RUO-grade products. GMP-grade products can be tested upon request.

Q: Is it possible to visually confirm the presence of PG peptide in the container?
A: No—trace amounts like 2 µg are too low to be visually detectable.

Q: The prices of PG peptides seem high.
A: Pricing is based on molar activity. For example, PG-001 is 1/16th the molecular weight of HGF, so 2 µg of PG-001 equals 32 µg of HGF; prices reflect equivalent activity.

Q: Is there a difference in activity per molar concentration between PG peptides and recombinant growth factors?
A: No—the activity per mole is adjusted to match that of corresponding growth factors.

Q: Do PG peptides act on different targets (off-targets)?
A: Panel testing against 68 targets showed no significant off-target activity for PG-001 to -003 at 5–10 µM. PG-004 inhibited glucocorticoid receptors by 64% at 10 µM but no off-target effects were seen at typical usage levels (pM–nM).

Q: Is it OK to assume PG peptides and recombinant growth factors have the same mechanism of action?
A: Generally, yes—they bind the same receptors and induce similar

proliferation/differentiation. However, growth factors can have weak bindings to other receptors that PG peptides may not replicate.

Q: Can PG peptides enter the cell?
A: They don't cross membranes but can transiently enter via receptor-mediated endocytosis. See "Degree of Residuals" for more.

Q: Will the PG peptide continue to remain on receptors on the cell membrane?
A: Usually washed out during purification. See "Degree of Residuals" for details.

Q: How safe are PG peptides?
A: Toxicity assays confirm no toxicity; see the in-depth answer under Properties: Toxicity.

Q: Any in vivo testing for safety?
A: No in vivo tests yet. Only in vitro cell toxicity data through 10 μM. Future in vivo data will be shared.

Q: What are the quality control methods for PG peptides after production?
A: Each batch is tested for ≥95% purity via LC/MS and by activity assays in cultured cells.

Q: Quality control on sterility of PG peptides after lyophilization?
A: Peptides are filter-sterilized, lyophilized, and sealed. Though sterility tests aren't performed after sealing, activity tests show no contamination.

Q: How stable are PG peptides?
A: Ongoing long-term stability tests. So far, lyophilized PG-001/-002 at –20 °C remain pure after 1 year. In-medium stability for 1 week has been confirmed.

Production

Q: Is it possible to manufacture under GMP?
A: Yes—contract manufacturers (e.g., PeptiStar) can produce PG peptides under GMP standards.

Q: Is it possible to issue certificates of Animal Origin Free (AOF)?
A: Yes—all peptides are fully chemically synthesized and AOF certified available.

Q: What are the shipping conditions/forms of PG peptides?
A: Shipped at –20 °C as lyophilized acetate salts without additives.

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