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Tips for Using NeoPL™-Apex in Human MSC Expansion

AICON-BIO® brand NeoPL™ products show optimal growth of grow human Mesenchymal Stem Cells (hMSCs) at 5 % (v/v) in typical cell culture media, i.e. α-MEM, which contains 2 mM L-Glutamine. We recommend seeding hMSCs at approximately 3×10^3 ~ $6x10^3$ cells per cm^2. In the culture media supplemented with NeoPL-Apex, **addition of exogenous Heparin is NOT required**.

Storage

NeoPL™-Apex is most stable when stored frozen (-20℃).

Usage

1. **Please thaw frozen NeoPL™-Apex in 37℃ water bath before use.** Once NeoPL™-Apex is thawed, remove from water bath immediately. It is **NOT** recommended to thaw NeoPL™-Apex at lower temperature (e.g. 4 ℃ or RT) demanding longer thawing time, which may cause an increase in number/size of insoluble particulates and potentially compromise NeoPL™-Apex potency.
2. It is recommended to use thawed NeoPL™-Apex for complete medium preparation (e.g. 5 %) immediately, or to divide it into single-use aliquots and store unused aliquots at -20℃.
3. It is highly recommended to prepare the NeoPL™-Apex containing medium on the same day or one day before cell culture and store the unused NeoPL™-Apex medium at 2℃ to 8℃ no longer than 1 week.

Precipitation in Cell Culture

Clotting or insoluble particles may be visible in thawed NeoPL™-Apex, especially after multiple freeze-thaw cycles. These are normal and do not affect cell culture performance. However, if you prefer to remove them, we recommend centrifuging NeoPL™-Apex at 3,400 x g for 3~5 minutes to eliminate insoluble matter before preparing the culture medium. Alternatively, filtering the prepared NeoPL™-Apex containing medium (e.g., 5%) through a 0.22 um filter is also acceptable and does not impact cell growth.

Note: 0.22 um filtration is **NOT** recommended for 100% NeoPL™-Apex concentrate.

Repeated freeze-thaw

Although NeoPL™-Apex can sustain a few cycles without compromising the potency, repeated freeze-thaw should be avoided, as they will enhance the number/size of insoluble particulates and potentially lose the vital factors for cell culture performance.

Version: A3.4 (10/2025)