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**SimPL<sup>SP</sup> (Simplified Platelet Lysate - Serum Porcine)**

Platelet lysate products are used as growth supplements for the culture of eukaryotic cells *in vitro* similar to the use of fetal bovine serum (FBS). Platelet lysates typically meet or exceed the performance of FBS due to their high growth factor content derived from platelet alpha-granules. SimPL is a platelet lysate product derived from animal whole blood collected at approved abattoirs in the United States which drastically lowers cost compared to platelet lysates derived from human material. This allows for large batch sizes and a consistent supply of product for industry and research organizations.

SimPL is a serum-converted platelet lysate that does NOT require the addition of heparin to prevent precipitate formation or clotting as is the case with other platelet lysate products. SimPL is recommended for use at 2-10% (v/v) in final media. It is possible that lower supplementation rates perform better than the maximum 10%. SimPL also contains trypsin inhibitors similar to other sera, and final media supplemented with SimPL can be used to inactivate trypsin used for passaging cells.

Typically, cell lines grown in media supplemented with FBS do NOT require adaptation schemes to acclimate to media supplemented with SimPL.

In some cases, cells will require additional magnesium added to the basal media to maintain optimal performance. This additional magnesium must be added to the basal media or after SimPL has been formulated with the basal media. Magnesium solutions must NOT be added directly to SimPL before media formulation; otherwise, undesirable precipitation and poor performance will result. USP, EP, or cell culture grade magnesium sulfate heptahydrate is recommended for use to bring final media Mg concentration to 2-6 mM. For evaluating new cell lines in media supplemented with SimPL, we recommend comparing performance between media with magnesium at a final concentration of 5mM and without additional magnesium for up to 5 passages or 15 days.

**Things to Consider:**

- Comparable performance to FBS
- Does NOT require heparin
- Use 2-10% (v/v) in final media
- Suitable for use with trypsin
- Typically no adaptation required
- Consider using added magnesium