



Human Platelet Lysate

PLTMax® and PLTGold® Human Platelet Lysates for Superior Cell Expansion

Unparalleled Cell Growth

Platelets play an important role in tissue repair and wound healing within the body. The growth factors and cytokines naturally found in platelet-rich plasma are contained within extracted platelet lysate solution. Human platelet lysate is an effective, high-protein supplement for human cell culture and expansion, including mesenchymal stem/stromal cells (MSC). In both research and clinical applications, human platelet lysate is often used as an alternative to sera, such as fetal bovine serum (FBS) or human AB serum.

PLTMax® and PLTGold® Human Platelet Lysates are revolutionary animal serum-free culture supplements with proven growth and cellular kinetic properties, and are routinely used for culture and expansion of both primary cells and stem cells. PLTMax® and PLTGold® enable excellent MSC growth and proliferation in a variety of media, most notably in combination with the defined NutriStem® MSC Medium.

PLTMax® and PLTGold® are generated from large pools of platelets from multiple donors, which are sourced and manufactured to produce a consistent and reliable culture supplement with very low lot-to-lot variability. The consistency in the reagents is reflected not only in the observed cell kinetics assays, but also in many other parameters analyzed, including consistent levels of FGF, VEGF, PDGF-AB, and PDGF-BB, measured across numerous production batches.

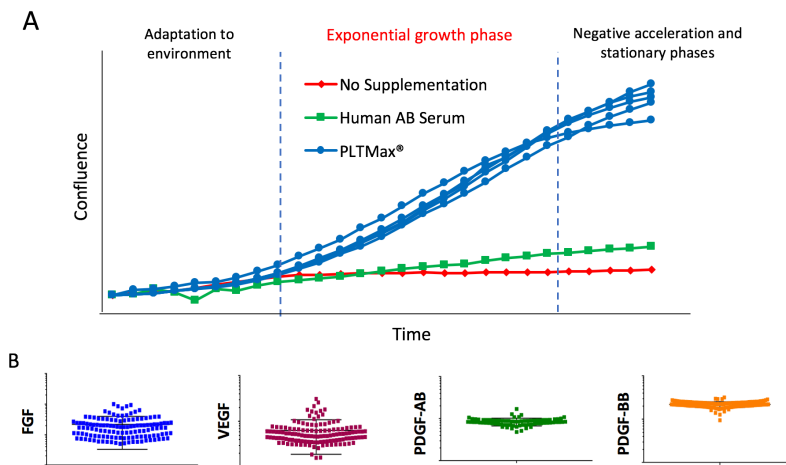


Figure 1: High lot-to-lot consistency. A) Minimal batch variation is seen by real-time imaging of adipose-derived (AD-) MSCs across 5 production lots of PLTMax®. The growth of cells cultured in media from each lot of PLTMax® is plotted based on cell density measured at regular culture timepoints. The difference in media performance can be seen as early as 36 hours in culture. B) Consistency of growth factor levels is shown, measured in over 100 production lots of PLTMax®. PLTGold® demonstrates the same consistency in cell growth and growth factor levels across production lots (data now shown).

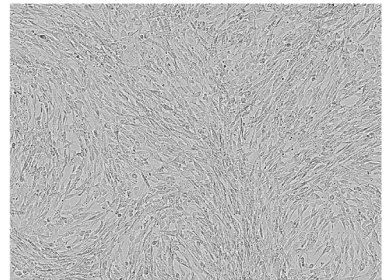
PLTMax® Human Platelet Lysate

- Superior alternative to FBS
- Enhanced genetic stability in long-term MSC cultures
- Faster cell growth kinetics and cell doubling times
- Used in over 30 clinical trials worldwide

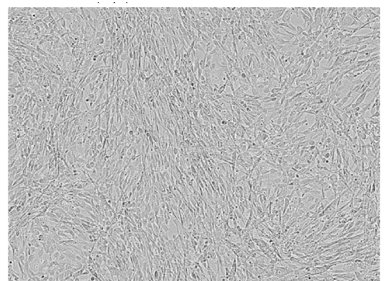
PLTGold® Human Platelet Lysate

- Promotes rapid and healthy cell expansion
- No animal components
- Non-fractionated, non-depleted
- No heparin or anticoagulants needed

A PLTGold®



B PLTMax®



Cell Images: Human AD-MSCs cultured in NutriStem® MSC Medium supplemented with either A) 5% PLTGold® or B) 5% PLTMax®. These images were taken on Day 4 of a standard cell kinetics assay, showing excellent cell proliferation and healthy morphology.

Clinical Translation

GMP-manufactured, clinical grade PLTMax® and PLTGold® enable a smooth transition from research to the clinic. A complete and specific drug master file (DMF) is registered with the FDA for expedited use of these reagents as a manufacturing component in the generation of cells used for clinical therapies.

PLTMax® is the original GMP-produced human platelet lysate, and has been used to culture cells for hundreds of patients. PLTMax® has been used in the clinic since 2008, including more than 30 Phase I, II, and III clinical trials worldwide in indications including neurology, nephrology, gastrointestinal disease, wound repair, and cardiology.

PLTGold® is the next generation of human platelet lysates, demonstrating the same exceptional performance in cell culture and expansion as PLTMax® a completely xeno-free supplement. Through pioneering advancements in platelet processing, PLTGold® is a whole, non-fractionated, non-depleted product that does not clot and does not require heparin or any additional anticoagulants at any stage. PLTGold® contains all of the growth factors and proteins needed for maximized cell growth in a truly xeno-free solution that continues to out-perform other serum supplements.

Dedicated to Quality

Platelets used in manufacture of PLTMax® and PLTGold® meet eligibility criteria at the time of their collection as defined by AABB Standards for Blood Banks and Transfusion Service and the FDA. Multiple donor units are pooled in large batch sizes and manufactured to produce a product that is rigorously evaluated and proven to be consistent lot-to-lot, providing dependable cell culture growth kinetics and eliminating the need for lot matching or pre-screening.

	PLT Gold®	PLTMax®	MSC-Qualified FBS	FBS
Research Grade	X	X	X	X
Clinical Grade	X	X		
GMP-Manufactured	X	X		
Animal Serum-Free	X	X		
Xeno-Free	X			
Validated for MSC Culture	X	X	X	
No Lot-Testing Required	X	X	X	
Enhanced Growth Kinetics	X	X		
Cost-Efficient	X	X		

Product	Grade	Cat. #	Qty.*
PLTMax® Human Platelet Lysate	Research	PLTMAX100R	100 mL
	GMP, Clinical	PLTMAX100GMP	100 mL
PLTGold® Human Platelet Lysate	Research	PLTGOLD100R	100 mL
	GMP, Clinical	PLTGOLD100GMP	100 mL
NutriStem® MSC Medium	GMP, Clinical	05-200-1A-KT	500 mL

* Additional sizes and/or customization available upon request.

How to Order

Biological Industries USA | T. 860.316.2702 F. 860.269.0596 | orders@bioindusa.com

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