



Selborne Biological Services – Lipimax® Bovine Lipoprotein Solution

Lipimax® is a highly purified lipid concentrate or lipoprotein solution. It is extracted from adult bovine serum of Australian origin and comprises a balanced profile of naturally occurring lipids, cholesterol, and essential fatty acids. **Lipimax®** provides a purified source of key nutritional and in vitro environmental components, while significantly reducing the purification concerns arising from the use of whole animal sera.

Applications

Lipimax® is designed to be used as a broad spectrum nutrient supplement where serum-free or reduced serum conditions are desired. As a highly purified aqueous solution, typical supplementation is only 0.25% - 0.5% per liter of complete medium. Some cell lines may require media optimization via additional supplementation of components such as albumin, transferrin, insulin, and selenium. Specific applications include:

- Enhance propagation of mammalian cells.
- Stimulate production of MAb's by CHO and hybridoma and other protein producing suspension cells.
- Enhance production efficiencies of recombinant proteins.
- Culture of Insect cells and Mycoplasma.

Product Quality Characteristics

ASSAY	SPECIFICATION	TYPICAL VALUE
Cholesterol	9.0 – 11.0 g/L	10.2 g/L
Sterility	No growth	No growth
Endotoxin	< 50 EU/mL	< 10 EU/mL
pH	7.0 – 8.4	8.0
Total Protein		
#ABL-03	13-18 mg/L	15.6 mg/L
#ABL-04	For Information Only	31.8 mg/L
Mycoplasma	Not detected	Not detected
Bovine IgG	Not detected	Not detected
Bovine Viruses (9CFR 113.46, 113.47, 113.53)	Not detected	Not detected

Lipimax®			
Lipimax® Bovine Lipoprotein Solution. Low protein modification optimized for biopharmaceutical manufacturing use.	AUSTRALIAN ORIGIN	100 mL 1000 mL	ABL03-003 ABL03-005

Lipimax® Suggested Adaptation

- Start by reducing serum by 50% and adding 0.25% **Lipimax®**.
- For suspension cultures such as CHO, Hybridoma's and other protein producing cells, you may be able to further reduce or possibly eliminate serum supplementation altogether by increasing **Lipimax®** to 0.5%. Additionally, some cell lines may require media optimization using components such as albumin, transferrin, insulin, selenium, or other similar components.
- For adherent cells, serum reduction is feasible. Complete elimination may prove difficult as the adherence factors in the serum may be required. We recommend replacing the use of FBS with a less expensive and safe-source alternative such as Selborne's Australian bovine calf serum. For viral antigen production, Selborne's Australian donor bovine serum would be an excellent option. The use of PEG treated bovine serum may be considered.



Selborne Biological Services – Closed Donor Bovine Herd in Tasmania

LipiMAX® Features and benefits

Features	Benefits
1. Australian bovine	Safest source : Category A EDQM Certificate of Suitability R1-CEP 2002-209-Rev 01
2. NLIS system in Australia	Traceable to the individual animal
3. Validated double adventitious agent inactivation step	<ul style="list-style-type: none"> ▪ Absence of : <ul style="list-style-type: none"> ○ Bacteria ○ Mycoplasma ○ Virus ○ BSE ▪ no irradiation required ▪ no expensive re-test for virus at end-user
4. Validated robust, reproducible production process	<ul style="list-style-type: none"> ▪ minimal batch to batch variation ▪ minimal pre-testing required <ul style="list-style-type: none"> ○ reduce time ○ reduce cost of testing
5. Non-detectable IgG	<ul style="list-style-type: none"> ▪ No interference of foreign antibodies in Mab purification ▪ Complete absence of BVDV antibodies ⁽¹⁾
6. Highly concentrated product (20 x versus FBS)	<ul style="list-style-type: none"> ▪ Saves storage space
7. 2-8 °C storage versus -20 °C	<ul style="list-style-type: none"> ▪ Much cheaper storage room ▪ Liquid ready to use product <ul style="list-style-type: none"> ○ No thawing ○ No homogenisation ○ Naturally homogeneous product ready to use at all times
8. Heating is part of process	<ul style="list-style-type: none"> ▪ LipiMAX® doesn't need heat inactivation
9. Easily filterable	<ul style="list-style-type: none"> ▪ Reduced filtration cost of media
10. Much lower price versus AUS, NZ, US FBS	<ul style="list-style-type: none"> ▪ Considerable cost saver in production
11. Raw material is widely available	<ul style="list-style-type: none"> ▪ Continuity of supply ▪ Stable price <ul style="list-style-type: none"> ○ No surprises in cost of production

(1) Inactivated virus and absence of BVDV antibodies means total control over BVDV issue

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