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Lacromin

Guidelines for Use

Lacromin™

Recombinant Human Lactoferrin (Holo)
Animal-free

Introduction

Lacromin™ is recombinant human lactoferrin that has been produced from an animal-free expression system¹. Human Lactoferrin belongs to the transferrin family of proteins and has amino-acid homology and similar iron binding properties to human transferrin. Lactoferrin is present in serum, milk and colostrum, and has additional growth supporting activities compared to human transferrin². It also utilizes different cellular receptors than human transferrin². Lactoferrin has been reported to regulate cell growth and differentiation, myelopoiesis, endothelial cell adhesion, and the production of cytokines and chemokines². A primary use of Lacromin™ in cell culture is to eliminate animal-derived transferrin in serum-free medium formulations.

Lacromin™ has been shown to enhance the growth of many cell types including intestinal cells, hybridoma cells, HEK, 3TC, and osteoblasts³. Lacromin's ability to enhance protein production has been tested in Hybridoma cell lines³. In these studies, Lacromin™ outperformed human transferrin and protein production was equivalent to that of FBS supplemented media³. The optimum concentration of Lacromin™ for cell culture varies with the cell line and the length of adaptation⁴. Reported effective concentrations for hybridoma lines range from 5-100 mg/L. Other cell lines, such as osteoblasts, show effective growth stimulation at concentrations below 1 mg/L⁴.

Instructions for use

Lacromin™ utilizes different cellular receptors than human transferrin. We recommend an initial concentration of 100 mg/L in combination with gradual adaptation. Many cell lines require little or no adaptation to Lacromin. Cell lines previously adapted to growth in serum-free formulations containing transferrin or iron-chelates may require an additional adaptation period. Following adaptation, Lacromin™ concentration can often be reduced through optimization.

For further information on Lacromin visit www.InVitria.com or contact technical support at 1-800-916-8311.

References:

1. Nandi, S. et al. *Transgenic Research*. 14:237-249 (2005).
2. Grey, A. et al. *Molecular Endocrinology* 18(9):2268-2278 (2004).
3. Data available: Invitria.com
4. Cornish, J., et al. *Endocrinology*. 145(9): 4366-4374.