

# 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 production system. Human Lactoferrin is present in serum, milk and colostrum, and has growth promoting activities in mammalian cell culture. Lactoferrin can also supply iron, similar to transferrin, in certain cell culture applications. Lactoferrin's iron-binding delivery to the cell is not as efficient as transferrin. Thus, it is not recommended as a direct replacement for transferrin. Lactoferrin utilizes different cellular receptors than human transferrin and has been reported to regulate cell growth and differentiation, myelopoiesis, endothelial cell adhesion, the production of cytokines and chemokines, and apoptosis. Lactoferrin stimulates proliferation in many cell types via the akt pathway. For cell culture applications, Lactoferrin can be used as a growth factor and the iron saturated form (Holo) is recommended. Lacromin is an iron saturated form (Holo) of recombinant human lactoferrin and has been designed specifically for cell culture applications and research. It is not intended for other uses.

### Applications

Lacromin has been shown to enhance the growth of many cell types including intestinal cells, hybridoma cells, HEK, 3TC, and osteoblasts. Lacromin's ability to enhance protein production has been tested in hybridoma and CHO cell lines. The optimum concentration of Lacromin for cell culture varies with the cell line. Reported effective concentrations for hybridoma cell lines range from 5-400 mg/L. HEK 293, 100-200 mg/L. CHO, 0.25-2 g/L. Other cell lines, such as osteoblasts, show effective growth stimulation at concentrations below 1 mg/L. Many cell lines require little or no adaptation to Lacromin. Following adaptation, Lacromin concentration can often be reduced.

### Storage and Preparation

Lacromin powder can be stored at 4° C although -20° C is preferred. Stock solutions can be prepared by dissolving gently into PBS for several minutes. Typical stock concentrations are 100 mg/ml in PBS, although others can be used. Avoid the formations of bubbles when dissolving. Filter through 0.2µ filter to sterilize. Lacromin is stable in solution for several weeks at 4° C and can be stored in solution at -20° C for long term storage. Avoid repeated freeze-thaw cycles of Lacromin in solution.

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