



Guidelines for Use

Optiferrin™

Recombinant Human Transferrin
Cell culture grade
Animal-Free

Introduction

Optiferrin is recombinant human serum transferrin that has been produced in an animal-free production system. Human transferrin is responsible for iron transport in animals. In cells, intracellular iron is required to maintain cell growth. Transferrin is the preferred method for iron delivery into cells where it enters through the transferrin receptor. Each 80 kDa transferrin can transport two iron molecules. In cell culture applications, iron delivery by transferrin has advantages compared to free iron or iron-chelators. Free iron promotes free radical formation, which can damage cells. Iron-chelators tend to disrupt downstream processes and tend to have lower iron bioavailability, require excessive iron loading in cell culture media. Optiferrin is designed for use in cell culture media and life science research. It is not intended for use in humans.

Applications

Optiferrin has been shown to enhance the growth of many cell types including hybridoma and primary cell lines. The optimum concentration of Optiferrin™ for cell culture varies with the cell line. In CHO, effective concentrations range from 10 – 50 mg/L. The reported effective concentrations for hybridoma and Vero cell lines range from 5-20 mg/L. Effective concentrations for primary cells vary between 5-200 mg/L. Cell lines require little or no adaptation to Optiferrin.

Storage and Preparation

Optiferrin powder can be stored at 4° C although -20° C is recommended. Stock solutions can be prepared by dissolving gently into PBS for several minutes. Typical stock concentrations are 100-200 mg/ml in PBS, although others can be used. Avoid the formation of bubbles when dissolving. Filter through 0.8 µm pre filter followed by a 0.2µm filter to sterilize. Optiferrin is stable in solution for several weeks at 4° C and can be stored frozen at -20° C for longer term storage. Avoid repeated freeze-thaw cycles of Optiferrin solution.

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