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Certificate of Analysis and Data Sheet

Recombinant Human Intrinsic Factor

Catalog No.
228-10968

Source
Sf9 Insect Cells

Synonyms

Gastric intrinsic factor, Intrinsic factor, INF, IF, GIF, IFMH, TCN3, Cobalamin/Vitamin B-12 binding transport protein.

Introduction

Intrinsic Factor is a member of the cobalamin transport protein family. It encodes a glycoprotein secreted by parietal cells of the gastric mucosa and is required for adequate absorption of vitamin B12 in the terminal ileum. Vitamin B12 is essential for erythrocyte maturation and mutations in the Intrinsic Factor may lead to congenital pernicious anemia. Upon entry into the stomach, vitamin B12 binds to one of two B12 binding proteins present in the gastric fluid. In the less acidic environment of the small intestine, these proteins dissociate from the vitamin, allowing it to bind to intrinsic factor and enter the portal circulation through a receptor in the ileal mucosa specific for the B12-intrinsic factor complex.

Description

Intrinsic Factor Human Recombinant produced in baculovirus is a glycosylated, polypeptide chain containing having a molecular mass of 55,000 Dalton.

The Intrinsic Factor is fused to a hexa-histidine at the C-terminus and purified by proprietary chromatographic techniques for removal of bound Vitamin B-12.

Physical Appearance

Sterile Filtered colorless solution.

Formulation

The protein solution (0.7mg/ml) contains 20mM HEPES pH-8, 100mM NaCl, 20% Glycerol.

Stability

IF although stable at 10°C for 1 week, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). **Please prevent freeze-thaw cycles.**

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Biological Activity

Standard ELISA test (checker-board analysis of positive/negative sera panels), immunodot with anti-IF autoantibody positive patient sera. Can be used for solid ELISA and fluid phase diagnostic assays, 0.25-0.65µg/ml. Suitable for biotinylation and iodination.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**