

Intrinsic Factor (IF)

Antigen Specification

Product Number: 16700

Description:

Human gastric intrinsic factor (IF, GIF); cobalamin/vitamin B12-binding transport protein. Recombinant antigen for solid (ELISA) and fluid phase diagnostic assays.

Immunological function:

Binds IgG-type human auto-antibodies. Auto-antibodies to IF recognize mostly conformation-dependent epitopes which appear to overlap the vitamin B12 binding site (as judged from reduced autoantibody reactivity of vitamin B12-loaded IF antigen).

Origin:

Recombinant. Expressed by recombinant baculovirus (*Autographa californica* multiple nuclear polyhedrosis virus; AcMNPV) infection of *Spodoptera frugiperda* Sf9 insect cells. Purification of recombinant IF includes steps for removal of bound vitamin B12.

Expression construct:

Full-length cDNA coding for secreted IF fused to a hexa-histidine purification tag at the C-terminus.

Biochemical tests:

SDS-PAGE (purity > 80 %); Western blot with anti-hexa-His-tag antibody.

Calculated molecular weight:

44,228 Dalton (protein component excluding glycosylation; observed molecular weight in SDS-PAGE is approx. 55 kDa).

Calculated isoelectric point:

pH 6.3

Immunological tests/Functionality:

Standard ELISA test (checkerboard analysis of positive/negative sera panels); immunodot with anti-IF autoantibody positive patient sera. Vitamin B12 binding capacity and biological function have not been determined.

Recommended buffer/storage and handling conditions:

Recommendations for storage buffer: neutral to slightly alkaline pH. Storage temperature: -70° to -80° C. Repeated freeze/thaw cycles should be avoided.

Coating concentration:

0.25-0.65 μ g/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination.

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