Intrinsic Factor (IF)

Antigen Specification

Product Number: 16700

Description:
Human gastric intrinsic factor (IF, GIF); cobalamin/vitamin B12-binding transport protein.
Recombinant antigen for in vitro research and manufacturing use only.

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.

Biochemical tests:
SDS-PAGE (purity > 80%); Western blot with anti-IF autoantibody-positive sample.

Calculated molecular weight:
44 kDa (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 samples); immunodot analyses with positive/negative samples.
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 conditions: -70°C or below.
Repeated freeze/thaw cycles should be avoided.

Coating concentration:
0.25-0.65 µg/mL (depending on the type of ELISA plate and coating buffer). Suitable for labeling of functional groups.