

## 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.

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