Clinical Use
• Assess risk of type 1 diabetes
• Predict onset of type 1 diabetes
• Diagnose new onset type 1 diabetes

Reference Range
Antibody Titer
Negative <1.25 JDF Units

NOTE: End point titers are compared to a single international reference standard and values are reported in JDF (Juvenile Diabetes Foundation) units.

Interpretive Information
• Patients at risk for developing type 1 diabetes
• Type 1 diabetes

Clinical Background
Autoantibodies directed against pancreatic islet cells (islet cell antibodies, ICA) include glutamic acid decarboxylase (GAD), IA-2, insulin, GM2-1, and other cell surface proteins. Although ICA attacks all pancreatic islet cells, cell destruction appears specific for insulin-producing islet cells (beta cells), leading to insulin deficiency. ICA are present in the serum of patients during the prediabetic phase and predict development of type 1 disease.

Radiobinding assays are available for assessment of GAD-65, IA-2, and insulin autoantibodies and are more reliable as markers for the prediabetic state. This IFA assay measures a variety of antibodies, has limited sensitivity, and is only semi-quantitative.

Method
• Immunofluorescence assay
• Titer provided (at an additional charge) if antibody is present

Specimen Requirements
2.0 mL refrigerated serum
0.5 mL minimum
No additive red top preferred
SST red top acceptable