

Product Specification Sheet

**Human Insulin Antibodies**

□ Cat. # INSL17-A-400

G. Pig Anti-Human Insulin IgG

**SIZE:** 400 ug

Insulin is a hormone that is central to regulating energy and glucose metabolism in the body. Insulin causes cells in the liver, muscle, and fat tissue to take up glucose from the blood, storing it as glycogen in the liver and muscle. Insulin is a peptide hormone composed of 51 amino acids and has a molecular weight of 5808 Da. It is produced in the islets of Langerhans in the pancreas. The name comes from the Latin insula for "island". Insulin's structure varies slightly between species of animal. Insulin from animal sources differs somewhat in "strength" (in carbohydrate metabolism control effects) in humans because of those variations. Porcine (pig) insulin is especially close to the human version.

When control of insulin levels fails, diabetes mellitus will result. As a consequence, insulin is used medically to treat some forms of diabetes mellitus. Patients with Type 1 diabetes mellitus depend on external insulin (most commonly injected subcutaneously) for their survival because the hormone is no longer produced internally. Patients with Type 2 diabetes mellitus are insulin resistant, and because of such resistance, may suffer from a relative insulin deficiency. Some patients with Type 2 diabetes may eventually require insulin if other medications fail to control blood glucose levels adequately, though this is somewhat uncommon.

**Source of Antigen and Antibodies**

|                            |   |
|----------------------------|---|
| <b>Antigen</b>             | Human insulin protein   |
| <b>Antibody host/type</b>  | G. pig polyclonal purified IgG, <b>Cat # INSL17-A</b> supplied in PBS, pH 7.4, 0.1% azide in liquid or powder |
| <b>Secondary Ab</b>        | Goat Anti-G. pig IgG-HRP cat # 50325 (AP, biotin, FITC conjugates also available)                             |
| <b>Negative Control Ab</b> | # 20004-1, G. Pig (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control                 |

**Form & Storage**

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** (1:500:2000) using ECL. Insulin in 6 Kda/

**ELISA** (0.1-1 ug/ml as detecting antibody. Suitable as capture antibody.

**RIA:** 1:5,000-1:20,000 dilution

**Histochemistry:** not tested. We recommend the use of 2-10 ug/ml of antibody in paraformaldehyde-fixed, paraffin embedded sections.

**Specificity & Cross-reactivity**

INSL17-A reacts with human and porcine insulin. Antibody crossreactivity in various other species is not established. Does not crossreact with human C-Peptide, human, rat, mouse or porcine Somatostatin, or human, rat, mouse, porcine, bovine or canine Glucagon, or human Amylin, Pancreatic polypeptide or IGF-1. Purified recombinant human insulin (#INSL16-N-5) or insulin analogs, Glargine (#INSL17-N-5) or Lispro (#INSL18-N-5) can be used for control studies to compare antibody reactivity.

**General References:** Bell GI (1980) Nature 284, 26-32; Melloul D (2002) Diabetologia 45, 309-326; Steiner DF (1967) PNAS 57, 473-480;

\*This product is for In vitro research use only.

**Related material available from ADI**

|   |   |                |
|---|---|----------------|
| Mouse-Mono Insulin/proinsulin IgG, aff pure | INSL11-M Monoclonal   | Anti-Rat/Mouse |
| G. pig-Poly                                 | INSL12-S Anti-Porcine Insulin antiserum   |                |
| Mouse-Mono                                  | INSL13-M Monoclonal Anti-Human Insulin IgG, aff pure  |                |
| Mouse-Mono                                  | INSL14-M Monoclonal Anti-Human Pro-Insulin IgG, aff pentapeptide IgG, aff pure                              |                |
| INSL15-N-10                                 | Bovine pancreas Insulin (~30 USP U/mg)  |                |
| INSL16-BTN                                  | Recombinant (Yeast) Human Insulin (USP grade)-Biotin  |                |
| INSL16-BTN-B                                | Recombinant (Yeast) Human Insulin (USP grade)-Biotin  |                |
| Mouse-Mono                                  | INSL16-M Monoclonal Anti-Rat C-peptide IgG, aff pure grade) for cell culture and ELISA                      |                |
| G. pig-Poly                                 | INSL17-A Anti-Human Insulin IgG, aff pure   |                |
| INSL17-N-5                                  | Recombinant (Yeast) Human Glargine (Insulin analog) (USP grade) for cell culture and ELISA                  |                |
| INSL18-N-5                                  | Recombinant (Yeast) Human Lispro (Insulin analog) (USP grade) for cell culture and ELISA                    |                |
| INSL19-N-10                                 | Porcine Insulin (~30 USP U/mg)  |                |
| INSL20-AS                                   | Human+Bovine+Porcine Insulin-agarose affinity support   |                |
| 0030-10-B1                                  | Bovine Insulin ELISA Kit, 96 tests, Quantitative,   |                |
| 0030-20-1                                   | Human Insulin-Biotin ELISA Kit, 96 tests, Quantitative, 96 tests  |                |
| 0030-40-1                                   | Mouse Insulin ELISA Kit, High Sensitivity, Quantitative, 96 tests   |                |
| 0030-50-1                                   | Rat Insulin ELISA Kit, High Sensitivity, Quantitative, 96 tests   |                |
| 0030-60-1                                   | Mouse/Rat Proinsulin ELISA Kit, High Sensitivity, Quantitative, 96 tests                                    |                |
| 0030N                                       | Human Insulin ELISA Kit, 96 tests, Quantitative, 96 tests   |                |
| 0035-IA                                     | Human Insulin & Insulin Analogs (Lispro/Humalog, Aspart, Glargine, Glulisine, Detemir) ELISA Kit, 96 tests, |                |
| 0040  | Human C-peptide ELISA Kit, 96 tests, Quantitative   |                |

INSL17-A-400-

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