

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Reg1A in direct ELISAs. In direct ELISAs, approximately 80% cross-reactivity with recombinant human (rh) Reg1B is observed, approximately 20% cross-reactivity with recombinant mouse Reg1, and less than 5% cross-reactivity with rhReg3A and recombinant rat Reg1A is observed. 100% cross-reactivity with rhReg1B in Western blot is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Reg1A Gln23-Asn166 Accession # P05451
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

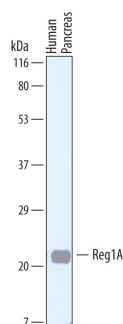
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

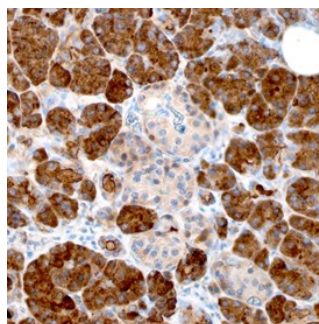
DATA

Western Blot



Detection of Human Reg1A by Western Blot. Western blot shows lysates of human pancreas tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Reg1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4937) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for Reg1A at approximately 20-22 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Reg1A in Human Pancreas. Reg1A was detected in immersion fixed paraffin-embedded sections of human pancreas using Sheep Anti-Human Reg1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4937) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in exocrine cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Reg1A (Regenerating gene IA/α; also REG, ICRF, PSPS, PTP and Lithostathine-1α) is a secreted, variably glycosylated 15-22 kDa type I member of the REG gene family of proteins. It is induced in proliferating cell types such as colonic epithelium, islet β-cells, and multiple tumor types, and is constitutively expressed by pancreatic acinar cells. Thus, Reg1A is found both in blood (ng/mL quantities) and pancreatic secretions. It would appear that Reg1A plays a role in blocking apoptosis, and is upregulated by both IL-22 and IL-6. Human Reg1A is synthesized as a 166 amino acid (aa) precursor. It contains a 22 aa signal sequence plus a 144 aa mature region that is characterized by the presence of three intrachain disulfide bonds, one C-type lectin domain (aa 34-164), and a utilized N-terminal O-linked glycosylation site (Thr27). Variability in the glycosylation pattern, plus proteolytic cleavage after Arg11 generates Reg1A isoforms in the 15-22 kDa range. There is one potential isoform variant that shows an alternative start site at Met9. Mature (aa 23-166) human Reg1A shares 76% and 69% aa sequence identity with mouse and rat Reg1A, respectively.

Reg1B, also known as secretory pancreatic stone protein 2 and lithostathine 1 beta, is a type I subclass member of the Reg family, which comprises secreted proteins with a C-type lectin domain. Reg1B is highly related to Reg1A, a protein that is implicated in islet cell regeneration and diabetogenesis.