

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human ALK-7 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant rat ALK7 is observed and no cross-reactivity with recombinant mouse Activin RIA/ALK2 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 810510
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human ALK-7 Leu26-Glu113 Accession # Q8NER5
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 as a 0.2 µm filtered solution in PBS.

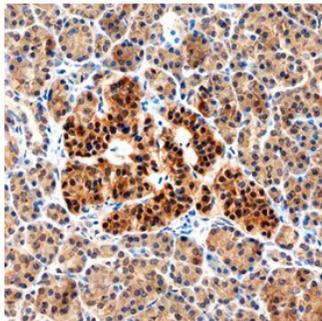
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



ALK-7 in Human Pancreas. ALK-7 was detected in immersion fixed paraffin-embedded sections of human pancreas using Mouse Anti-Human ALK-7 Monoclonal Antibody (Catalog # MAB7749) at 15 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-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counter-stained with hematoxylin (blue). Specific staining was localized to islet cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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

Activin receptor-like kinase 7 (ALK-7), also known as Activin R1C (gene name ACVR1C), is a glycosylated 58 kDa type I receptor in the superfamily of TGF-β serine/threonine kinase receptors. It associates with type II receptors to form a signaling complex that responds to the ligands Activin AB, and Activin B, GDF3, and Nodal. ALK-7 plays a role in regulating energy balance by inhibiting insulin secretion and inducing pancreatic beta cell apoptosis. It is expressed in adipose tissue but downregulated in obesity. ALK-7 is also expressed in pituitary gonadotropic cells and in pre-eclamptic placenta. It induces the apoptosis of trophoblasts as well as ovarian granulosa and epithelial cells. Within the extracellular domain, human ALK-7 shares 95% and 91% amino acid (aa) sequence identity with mouse and rat ALK-7, respectively. Alternate splicing of human ALK-7 generates additional isoforms with either a 50 aa N-terminal truncation or with deletions of 79 aa or 157 aa that encompass the transmembrane segment.