

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Trypsin Pan Specific (PRSS1/2/3) in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Trypsin 2 Ala16-Ser247 Accession # P07478
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.

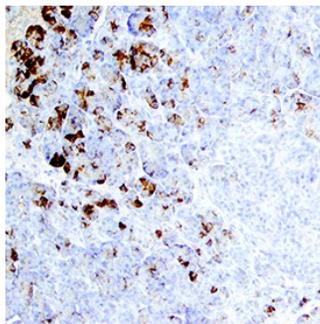
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human Trypsin 1/PRSS1 (Catalog # 3848-SE) Recombinant Human Trypsin 2/PRSS2 (Catalog # 3586-SE)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Trypsin 3/PRSS3 (Catalog # 3710-SE), see our available Western blot detection antibodies
Neutralization		Measured by its ability to neutralize Recombinant Human Trypsin 2/PRSS2 (0.02 µg/mL, Catalog # 3586-SE) cleavage of the fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK(Dnp)-NH ₂ (10 µM, Catalog # ES002). The Neutralization Dose (ND ₅₀) is typically 0.3 µg/mL.

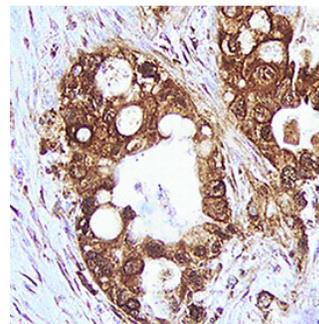
DATA

Immunohistochemistry



Trypsin in Human Pancreas. Trypsin was detected in immersion fixed paraffin-embedded sections of human pancreas using Sheep Anti-Human Trypsin Pan Specific (PRSS1/2/3) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3586) at 15 µg/mL overnight at 4 °C. 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 exocrine cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



Trypsin in Human Pancreatic Cancer Tissue. Trypsin was detected in immersion fixed paraffin-embedded sections of human pancreatic cancer tissue using Sheep Anti-Human Trypsin Pan Specific (PRSS1/2/3) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3586) at 5 µg/mL overnight at 4 °C. 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 of cancer cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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

Trypsin is a general term for any of three 24 kDa gene products that belong to the peptidase S1 family of enzymes. Trypsin in Greek means "rubbing or friction", and it was chosen here because the first trypsins were extracted from pancreas via a glycerin-based rubbing maceration. Trypsin-1 (cationic), -2 (anionic), and -3 (mesotrypsin) are synthesized as 26 kDa trypsinogens (plus a 35 kDa trypsinogen-3 isoform) that are 247 amino acids (aa) in length. The first 15 aa constitute a signal sequence, followed by an enterokinase-cleavable eight aa propeptide, and a 224 aa mature molecule. Asp194 is linked to enzyme activity, and Tyr154 is sulfated. Over their mature regions, the three trypsins share 84% aa identity. Mouse trypsin-1 shares 74% aa identity with the human trypsin consensus sequence. Trypsin-1 and -2 cleave peptide bonds carboxylterminal to a Lys or Arg. Trypsin-3 has limited activity on trypsin inhibitors, and thus regulates general trypsin activity. Trypsin-1, -2, and -3 are expressed by multiple tissues, including pancreas (for general digestion), liver, lung and skin. In blood, trypsinogen-1 and -2 circulate at ng/mL concentrations. In pancreatic fluid, trypsin-1, -2, and -3 are found in a 58:40:2 ratio. This antibody did not neutralize the activity of rhTrypsin 1 and rhTrypsin 3 significantly.