

Pepsin A (H-44): sc-99081

BACKGROUND

Pepsin is one of the main proteolytic enzymes secreted by the gastric mucosa. Pepsin consists of a single polypeptide chain and arises from its precursor, pepsinogen, by removal of a 41 amino acid segment from the N-terminus. Pepsinogen is synthesized in the stomach lining, and hydrochloric acid, also produced by the gastric mucosa, is necessary to convert the inactive enzyme and to maintain the optimum acidity (pH 1-3) for Pepsin function. Pepsin is particularly effective in cleaving peptide bonds involving aromatic amino acids. Pepsin shows extremely broad specificity; although bonds involving phenylalanine and leucine are preferred, many others are also cleaved to some extent. Pepsin A is a member of the subfamily A1 within the Pepsin family and is the predominant endopeptidase in the gastric juice of vertebrates. Pepsin A is inhibited by OVUS-1, a uterine serpin.

REFERENCES

1. Carles, C. and Martin, P. 1985. Kinetic study of the action of bovine chymosin and Pepsin A on bovine κ -casein. Arch. Biochem. Biophys. 242: 411-416.
2. Okoniewska, M., et al. 1999. The role of the flap residue, Threonine 77, in the activation and catalytic activity of Pepsin A. Protein Eng. 12: 55-61.

CHROMOSOMAL LOCATION

Genetic locus: PGA3/PGA4/PGA5 (human) mapping to 11q12.2.

SOURCE

Pepsin A (H-44) is a rabbit polyclonal antibody raised against amino acids 281-324 mapping near the C-terminus of Pepsin A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Pepsin A (H-44) is recommended for detection of Pepsin A and Pepsinogen A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pepsin A (H-44) is also recommended for detection of Pepsin A and Pepsinogen A in additional species, including porcine.

Suitable for use as control antibody for Pepsin A siRNA (h): sc-61317, Pepsin A shRNA Plasmid (h): sc-61317-SH and Pepsin A shRNA (h) Lentiviral Particles: sc-61317-V.

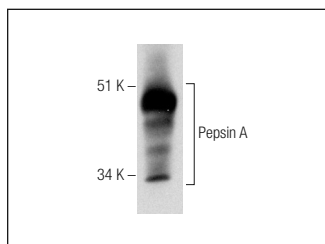
Molecular Weight of Pepsin A: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human stomach extract: sc-363780.

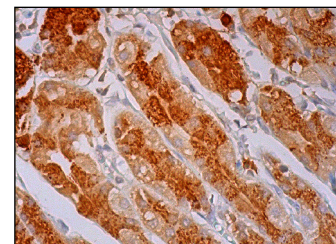
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Pepsin A (H-44): sc-99081. Western blot analysis of Pepsin A expression in human stomach tissue extract.



Pepsin A (H-44): sc-99081. Immunoperoxidase staining of formalin fixed, paraffin-embedded lower stomach tissue showing cytoplasmic staining of glandular cells.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **Pepsin A (A-10): sc-271798** or **Pepsin A (D-5): sc-365680**, our highly recommended monoclonal alternatives to Pepsin A (H-44).