SANTA CRUZ BIOTECHNOLOGY, INC.

Enterokinase HC (D-16): sc-51278

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The Power to Question

BACKGROUND

Enterokinase, also known as enteropeptidase or serine protease 7, belongs to the peptidase S1 family and localizes to the intestinal brush border in the proximal small intestine. It exists as a heterodimer of a catalytic light chain (LC) and a non-catalytic heavy chain (HC) linked together by a disulfide bond. Enterokinase HC plays a role in macromolecular substrate recognition and specificity. Duodenase is the serine protease responsible for the release and activation of Enterokinase from its inactive precursor. Active Enterokinase recognizes the target sequence Asp-Asp-Asp-Asp-Lys and is responsible for catalyzing the conversion of pancreatic trypsinogen to activated trypsin. Activated trypsin then further activates digestive enzymes such as chymotrypsin, carboxypeptidases, elastases and lipases, releasing them from their inactive precursors. Enterokinase is important for proper digestion of proteins. Improper functioning of Enterokinase may result in congenital enteropeptidase deficiency. This recessively inherited disorder leads to severe protein malabsorption and can result in low serum protein, chronic diarrhea and, in infants, a failure to thrive.

REFERENCES

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4. Kitamoto, Y., et al. 1995. cDNA sequence and chromosomal localization of human enterokinase, the proteolytic activator of trypsinogen. Biochemistry 34: 4562-4568.
5. Lu, D., et al. 1998. Bovine proenteropeptidase is activated by trypsin, and the specificity of enteropeptidase depends on the heavy chain. J. Biol. Chem. 272: 31293-31300.
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8. Song, H.W., et al. 2002. Engineered recombinant enteropeptidase catalytic subunit: effect of N-terminal modification. Arch. Biochem. Biophys. 400: 1-6.
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CHROMOSOMAL LOCATION

Genetic locus: TMPRSS15 (human) mapping to 21q21.1; Tmprss15 (mouse) mapping to 16 C3.1.

SOURCE

Enterokinase HC (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Enterokinase of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-51278 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Enterokinase HC (D-16) is recommended for detection of Enterokinase heavy chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Enterokinase HC (D-16) is also recommended for detection of Enterokinase heavy chain in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Enterokinase siRNA (h): sc-72233, Enterokinase siRNA (m): sc-72234, Enterokinase shRNA Plasmid (h): sc-72233-SH, Enterokinase shRNA Plasmid (m): sc-72234-SH, Enterokinase shRNA (h) Lentiviral Particles: sc-72233-V and Enterokinase shRNA (m) Lentiviral Particles: sc-72234-V.

Molecular Weight of Enterokinase HC: 120 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.