SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

Pepsin A siRNA (m): sc-152166

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., Tanaka, T. and Yada, R.Y. 1999. The role of the flap residue, Threonine 77, in the activation and catalytic activity of Pepsin A. Protein Eng. 12: 55-61.
3. Kageyama, T. 2004. Role of S'1 loop residues in the substrate specificities of Pepsin A and chymosin. Biochemistry 43: 15122-15130.
4. Akkerdaas, J.H., Wensing, M., Asero, R., Fernandez Rivas, M., Rivas, M.F., Knulst, A.C., Bolhaar, S., Hefle, S.L., Aalberse, R.C. and van Ree, R. 2005. IgE binding to Pepsin-digested food extracts. Int. Arch. Allergy Immunol. 138: 203-208.
5. Ibrahim, H.R., Inazaki, D., Abdou, A., Aoki, T. and Kim, M. 2005. Processing of lysozyme at distinct loops by Pepsin: a novel action for generating multiple antimicrobial peptide motifs in the newborn stomach. Biochim. Biophys. Acta 1726: 102-114.
6. Tagliazucchi, D., Verzelloni, E. and Conte, A. 2005. Effect of some phenolic compounds and beverages on Pepsin activity during simulated gastric digestion. J. Agric. Food Chem. 53: 8706-8713.
7. Schimek, E.M., Zwölfer, B., Briza, P., Jahn-Schmid, B., Vogel, L., Vieths, S., Ebner, C. and Bohle, B. 2005. Gastrointestinal digestion of Bet v 1-homologous food allergens destroys their mediator-releasing, but not T cell-activating, capacity. J. Allergy Clin. Immunol. 116: 1327-13233.
8. Schreiber, S., Bücker, R., Groll, C., Azevedo-Vethacke, M., Scheid, P., Gatermann, S., Josenhans, C. and Suerbaum, S. 2005. Gastric antibacterial efficiency is different for Pepsin A and C. Arch. Microbiol. 184: 335-340.
9. Simó, C., González, R., Barbas, C. and Cifuentes, A. 2005. Combining peptide modeling and capillary electrophoresis-mass spectrometry for characterization of enzymes cleavage patterns: recombinant versus natural bovine Pepsin A. Anal. Chem. 77: 7709-7716.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Pga5 (mouse) mapping to 19 A.

PRODUCT

Pepsin A siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Pepsin A shRNA Plasmid (m): sc-152166-SH and Pepsin A shRNA (m) Lentiviral Particles: sc-152166-V as alternate gene silencing products.

For independent verification of Pepsin A (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152166A, sc-152166B and sc-152166C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Pepsin A siRNA (m) is recommended for the inhibition of Pepsin A expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Pepsin A gene expression knockdown using RT-PCR Primer: Pepsin A (m)-PR: sc-152166-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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