SERRAPEPTASE



APPLICATIONS

- Supports Protein Digestion
- Supports Prebiotic Intestinal Health
- Inflammatory Support
- Antioxidant Support
- Blood Glucose Support
- Cardiovascular Support
- Respiratory Support





INTRODUCTION

Serrapeptase, also known as serratiopeptidase, is a proteolytic enzyme or protease isolated from the silkworm (*Bombyx mori*), which is used by the silkworm to help dissolve its cocoon.¹ It is commonly used for human health support in Europe and Japan.*2 Serrapeptase is a proteolytic enzyme that may help with the digestion of dietary proteins and may also help with clearing normal waste proteins associated with tissue repair.* Additionally, proteolytic enzymes may help to maintain tissue health by supporting plasmin and contributing healthy inflammatory support.*3

Inulin is a prebiotic, a non-digestible dietary fiber that is fermented by colonic microflora.*4 Its scientific name is beta(2-1)fructan.5 It is a fructo-oligosaccharide (FOS) found in roots and tubers that may help to support healthy microbiota, specifically *Lactobacillus spp.* and *Bifidobacteria spp.*^{6,7} Dietary sources of inulin include various fruits and vegetables as well as herbs such as chicory.⁴ Our inulin is sourced from Helianthus tuberosus, an edible tuber known as Jerusalem artichoke and a perennial in the Asteraceae/Compositae family.

Serrapeptase may help to digest dietary proteins, facilitating the absorption of their constituent amino acids, and inulin helps support a healthy intestinal microbiome.*6,7,8 Together, they work to support digestion, absorption, and overall intestinal health.* This product is a proprietary blend of serrapeptase (Peptizyme SP) and Inulin. This product is wheat-free, egg-free, and dairy free. It is gluten-free as defined by the U.S. FDA, with less than 20 ppm per S-ELISA testing, and is free from other gluten-containing grains such as barley, oats, rye, and spelt. It is also free of fish, shellfish, tree nuts, and peanuts.

SUPPORTS PROTEIN DIGESTION

Healthy protein digestion and absorption depend on the ability to disassemble dietary proteins into their constituent amino acids. Serrapeptase is a proteolytic enzyme that may help to support healthy digestion and absorption of dietary protein.*1 Serrapeptase may also help to support healthy clearing of normal cellular waste proteins.*1

SUPPORTS PREBIOTIC INTESTINAL HEALTH

Inulin is a dietary fiber that supports digestive health through a variety of mechanisms.* Inulin is indigestible, and therefore, not absorbed. Instead, it is fermented in the large intestine, resulting in short-chain fatty acids (SCFs) that support the growth of both *Lactobacillus spp.* and *Bifidobacteria spp.* with help to maintain gastrointestinal health.*^{6,7,8} Short-chain fatty acids may also help to maintain levels of GLP-1 and ghrelin already within the normal range.*⁹ Inulin may help to provide a sense of fullness and maintain a healthy caloric intake, in addition to supporting normal stool consistency and healthy stool regularity.*¹⁰

INFLAMMATORY SUPPORT

Serrapeptase may help with healthy inflammatory support.^{11,12,13} It may help to maintain tissue health by supporting plasmin's role in healing,³ and may help to maintain capillary permeability already within the normal range.^{*1} Serrapeptase helps to support healthy clearing of normal cellular waste,¹ and may also help to maintain levels of C3, C4, and haptoglobin that are already within the normal range.^{*14} Proteases may help to support physical exercise and exercise recovery.^{*14} Inulin may help to maintain the levels of lipopolysaccharides (LPS) and cytokines such as TNF-alpha and IL-6 already within the normal range.^{*16,17} It may also help to maintain NF-kappaB levels already within the normal range.^{*17}

OTHER USES

Antioxidant Support

The tubers of H. tuberosus and the inulin derived from them may help to contribute antioxidant support in a dose-dependent manner, as quantified by DPPH scavenging assay to determine free-radical scavenging support.*18,19 Animal studies have shown that inulin may contribute antioxidant support in a dose-dependent manner, with an inverse correlation between inulin and malondialdehyde (MDA) levels.*19

Blood Glucose Support

Because inulin is a non-digestible carbohydrate, it may support a more healthful post-prandial glycemic response.*20,21 It may help to maintain levels of ghrelin and somatostatin already within the normal range, which may in turn support healthier caloric intake and slower gastric emptying.*22 Inulin may help to maintain both fasting and post-prandial blood glucose already within the normal range, in addition to supporting healthy insulin sensitivity.*20,21

Cardiovascular Support

Inulin is fermented to short-chain fatty acids (SCFs) which may help to support normal fat oxidation.*23 Inulin may help to maintain levels of LDL and HDL already within the normal range.*24 According to a meta-analysis of randomized, controlled trials, it may also help to maintain levels of triacylglycerols already within the normal range.*25 within the normal range.*25

Respiratory SupportBecause of its proteolytic functions, serrapeptase may help to maintain normal sputum viscosity. Let may also help to support and maintain healthy tissue of the ears, nose, and throat.¹²

SAFETY AND CAUTIONS

Serrapeptase is generally well tolerated, and has been used in clinical trials for up to four weeks.²⁶ While nausea, epigastric pain, and gastrointestinal discomfort have been reported, rates were similar to those with the placebo.¹⁴ Serrapeptase may have fibrinolytic properties and should not be taken with anticoagulant or antiplatelet medications as it may increase the risk of bleeding.¹⁴ For the same reasons, caution should be used in those with bleeding disorders. Due to the potential of perioperative bleeding, serrapeptase should be avoided for at least two weeks prior to elective surgical procedures.²

Inulin is generally recognized as safe (GRAS) in the U.S. and is usually well tolerated.²⁸ Doses up to 20 g/day have been used for up to three weeks without significant negative effects.³¹ Side effects may include diarrhea, constipation, bloating, and flatulence, which are more significant in doses over 30 grams.²⁹ One serving of serrapeptase (two capsules) includes less than one gram of inulin. As inulin may help to support healthy blood glucose levels already within the normal range, theoretically, it may have additive effects with hypoglycemic medications.^{*20,21}

Safety not documented in breastfeeding or pregnant women, or in children under 3 years of age due to insufficient safety research.

* This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.



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