

Gastric mucin

Chemical Properties

CAS No. : 84082-64-4

Formula:

Molecular Weight:

Gastric mucin

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	Gastric mucin, a large glycoprotein, is thought to play a major role in protecting the gastrointestinal tract from acid, proteases, pathogenic microorganisms, and mechanical trauma. Gastric mucin is a natural protein derived from pigs.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Gastric mucin, a large glycoprotein, plays a crucial role in protecting the gastrointestinal tract against acid, proteases, pathogens, and mechanical damage. It is also implicated in gastric injuries caused by Helicobacter pylori, potentially leading to gastritis, peptic ulcers, and gastric cancer. Gastric mucins are classified into two categories based on histochemical properties: surface mucous cell-type mucin, secreted by surface cells, and glandular mucins, secreted by deeper mucosal cells including mucous neck, cardiac gland, and pyloric gland cells. The O-glycans within gastric mucin may act as natural antibiotics, offering protection against H. pylori infection. Additionally, gastric mucin guards the gastrointestinal epithelium by neutralizing oxidants in the lumen, despite reducing its viscoelastic properties. Studies have shown that both unaltered and pronase-treated mucin can effectively neutralize hydroxyl radicals, with no significant difference in their scavenging abilities. A concentration of 10 mg/mL of mucin is required to halve malondialdehyde production, applicable to both mucin types.

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble), H2O: < 0.1 mg/mL (insoluble), 0.1 M NaOH: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Reference

Toribara NW, et al. Human gastric mucin. Identification of a unique species by expression cloning. J Biol Chem. 1993 Mar 15;268(8):5879-85.

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