Human Mucus

Reprises the complex composition and biophysical properties of native GI mucus for standalone studies.

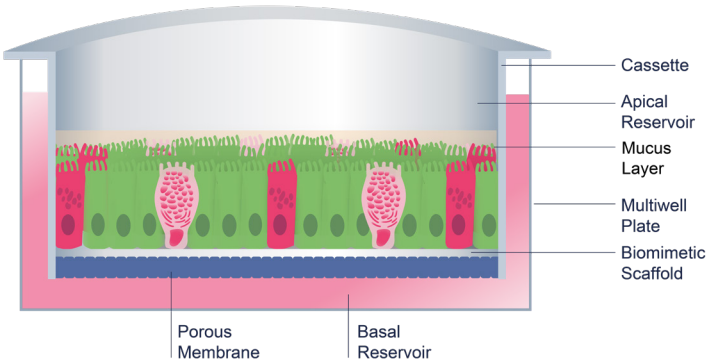
USES

- Absorption and adsorption
- Host-microbe interactions
- Mucolysis activity

HOW WE DO IT

PROPERTIES OF HUMAN MUCUS

- Harvested from primary human transverse colon epithelia
- Sterily derived in the absence of antibiotics
- Biophysical/rheological properties similar to native human GI mucus
- Muc2 and Muc5AC are the most abundant proteins
- Glycosylation includes sialic acid, succinyl and fucose groups



MONOLAYER OF MATURE INTESTINAL EPITHELIAL CELLS
TRANSWELL CROSS-SECTION

IMPORTANCE OF MUCUS IN THE LARGE INTESTINE

Human intestinal mucus is an essential component of the gastrointestinal tract, playing a pivotal role in maintaining gut health and functionality. GI mucus is a polymer gel composed of a complex mixture of glycoproteins, lipids, electrolytes, and water which forms a protective barrier against harmful pathogens, mechanical damage, and noxious chemicals.

In addition to its protective function, GI mucus provides the interface between the host epithelium and microbes, which fosters a symbiotic relationship with the gut microbiota, influences immune responses, and aids in nutrient absorption. Moreover, GI mucus provides lubrication essential for smooth digestion and waste elimination.

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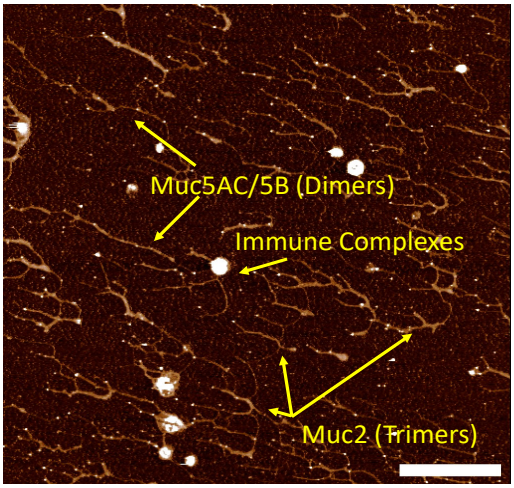
SAMPLE DATA

Sterile and antibiotic-free GI mucus reprises the complex composition and biophysical properties of native GI mucus.



Atomic force microscopy image shows organization of the complex mucin polymeric network, similar to that of native GI mucus.

Top 10 most abundant proteins by LC-MS/MS in Altis Human Mucus and Pig Gastric Mucus (PGM Type II and III).

	Altis Human Mucus	PGM Type II	PGM Type III
1	Mucin 2	Sperin Domain-Containing Protein	Sperin Domain-Containing Protein
2	Mucin 5AC	Chitinase	Latotransferrin
3	Polymeric Ig Receptor	Keratin 1	Histone H4
4	CECAM-5	Pepsin A	Keratin 10
5	CECAM-1	IgG heavy variable 3-23	Chitinase
6	Trefoil Factor 3	Trefoil Factor 1	Keratin 1
7	Mucin 5B	IgM Heavy Chain	Trypsinogen X1
8	Albumin	Mucin 5AC	IgM Heavy Chain
9	b2-microglobulin	CD63 Antigen	Mucin 5AC
10	Tetraspanin-8	Pepsin B	Ficolin-2

BE AMONG THE FIRST TO TEST CELL-DERIVED HUMAN MUCUS

Scan here to complete this interest form and be among the first to try human mucus.