



MG35533 | MICRO ANATOMY INTESTINAL VILLI, 400 TIMES ENLARGED



Nasco
HEALTHCARE





Anatomical model of Micro Anatomy of the Intestinal Villus, magnified approximately 400 times, representing the villi of the inner surface of the jejunum and its cavities/crypts. It presents a surface section demonstrating the histological formation of a villus with histological coloration, mounted on a base. This detailed model allows the study of the microscopic structure of the small intestine, facilitating the understanding of its absorptive function.

Applications:

Ideal for the study of the microscopic anatomy of the small intestine, training in medicine, biology, nursing and related courses. Indicated for demonstrations in practical classes and as a support tool for the learning of students and health professionals. Allows comparative analysis of anatomical structures and offers resources for continuing education in anatomy, physiology and pathophysiology.

Technical Characteristics:

* Educational equipment;



- * Numbered and hand-painted with didactic colors;
- * Precise details for learning;
- * High-fidelity natural molding;
- * Manufactured from resistant synthetic material;
- * True replica;
- * Resin approved in toxicological tests;
- * Includes an information card with the related structures;
- * Polymer base for support.

3D Technology and Augmented Reality:

Our anatomical models offer a visual complement through information cards that activate 3D models viewable in augmented reality (AR). This interactive platform assists learning, allowing comparative analysis of anatomical structures and offering resources for continuing education in anatomy, physiology and pathophysiology.

Technical Specifications:

- * Scale: 400x
- * Material: Synthetic resin

Main Structures:

mucosa: The intestinal mucosa is the innermost layer of the gastrointestinal tract, composed of a simple columnar epithelium, lamina propria of loose connective tissue and muscularis mucosae. In the small intestine, the mucosa presents circular folds, villi and microvilli, significantly increasing the surface area for nutrient absorption.

muscular layer: The muscular layer of the small intestine is formed by two sublayers of smooth muscle: an inner circular layer and an outer longitudinal layer. The coordinated contraction of these muscle layers promotes intestinal motility, mixing chyme with digestive secretions and propelling it along the gastrointestinal tract.

serosa: The serosa is the outermost layer of the small intestine, a serous membrane that covers and protects it, composed of a simple squamous epithelium (mesothelium) and underlying connective tissue. It reduces friction between organs and adjacent structures.

goblet cell: Specialized columnar epithelial cells in the secretion of mucus, a viscous substance that protects and lubricates the surface of the intestinal epithelium, facilitating the passage of food and protecting against damage.



intestinal crypt: Also known as crypts of Lieberkühn, are invaginations of the intestinal epithelium into the lamina propria. They contain goblet cells, enterocytes and enteroendocrine cells, which secrete digestive enzymes and hormones.

villus: Finger-like projections of the intestinal mucosa that considerably increase the surface area available for nutrient absorption. Each villus contains a network of blood capillaries and a lymphatic vessel (lacteal) for the transport of absorbed nutrients.

microvilli: Small projections of the apical membrane of enterocytes, forming the brush border. They further increase the surface area for absorption, containing digestive enzymes.

Paneth cell: Cells located in the intestinal crypts, responsible for the production of lysozyme, an enzyme with antimicrobial activity, contributing to intestinal immune defense.

Other structures can be verified directly on the physical piece or on the interactive 3D model.

About Anatomical Models:

They are developed with resin replication technology, meeting the demand for anatomical pieces for teaching and research. They present the essential morphological characteristics with excellent cost-benefit, good resistance, hand painting and numbering for precise identification of structures.

List of all visible structures:

- mucosa
- muscularis
- serosa
- goblet cell
- intestinal crypt
- villus
- microvilli
- Paneth cell