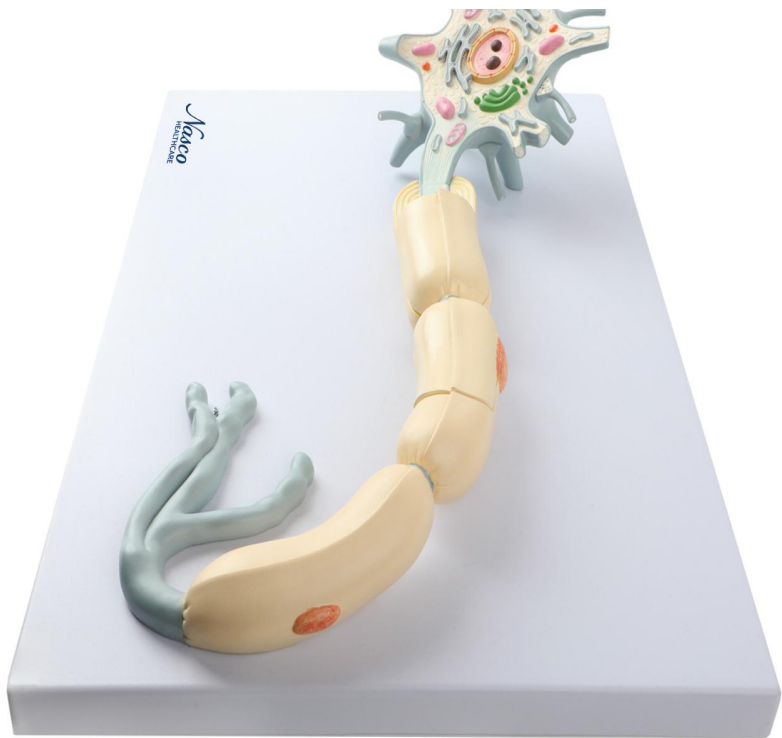




MG23433 | NEURON WITH DENDRITE AND AXON, 2 PARTS



Nasco
HEALTHCARE







Two-Part Anatomical Neuron Model: This 2,500x magnified model shows the detailed structure of a typical neuron, including the cell body, dendrites, and axon. Its two-part construction allows visualization of internal structures such as the Schwann cell and myelin sheath. Important anatomical structures are numbered and hand-painted with didactic colors to facilitate learning.

Applications:

- * Anatomy studies in schools and universities.
- * Professional training in the medical field.
- * Patient explanations about nerve physiology.
- * Supporting material for medical and scientific information.
- * Study of neuroanatomy and general anatomical structure.
- * Training for surgical dissection.
- * Demonstration of medical procedures.

Technical Advantages:

- * Detailed representation of a typical neuron and its internal structures.
- * Numbering and hand-painting of anatomical structures for easy identification.
- * Produced with high-quality resin, approved in toxicological tests.



- * Natural molding, ensuring high fidelity to the original model.
- * Durable synthetic material.
- * Includes an information card with related structures.
- * Mounted on a polymer base for better visualization and handling.

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: 2,500 times natural size.
- * Material: Synthetic resin.
- * Model is not to natural size scale.

Main Structures:

Dendrites: These are thin, branched extensions of the neuron responsible for receiving nerve stimuli from other cells and conducting them towards the cell body. Their extensive branching increases the surface area for signal reception.

Cell Membrane: A thin layer that surrounds the neuron, delimiting its cytoplasm from the external environment. It is selectively permeable, controlling the entry and exit of substances.

Rough Endoplasmic Reticulum: A network of intracellular membranes associated with ribosomes, responsible for protein synthesis. It is especially abundant in neurons due to the high demand for proteins for the construction and maintenance of their structures.

Nuclear Pores: Protein complexes that cross the nuclear membrane, regulating the transport of molecules between the nucleus and the cytoplasm. They allow the passage of messenger RNA (mRNA) for protein synthesis in the cytoplasm.

Chromatin: The neuron's genetic material, composed of DNA and proteins. Chromatin condenses into chromosomes during cell division.

Nuclear Membrane: Envelopes the neuron's nucleus, separating the genetic material from the cytoplasm. It has nuclear pores that regulate the transport of molecules.



Golgi Complex: An organelle responsible for the processing, modification, and packaging of proteins and lipids. Proteins synthesized in the rough endoplasmic reticulum are transported to the Golgi complex for post-translational modifications.

Node of Ranvier: Intervals in the myelin sheath of the axon where the axonal membrane is exposed. The Nodes of Ranvier accelerate the conduction of the nerve impulse.

Synapse: The site of communication between two neurons or between a neuron and an effector cell (muscle or gland). The transmission of the nerve impulse at the synapse occurs through the release of neurotransmitters.

Smooth Endoplasmic Reticulum: A network of intracellular membranes that are not associated with ribosomes. It participates in various cellular functions, including lipid metabolism and the regulation of intracellular calcium.

Nissl Bodies: Aggregates of rough endoplasmic reticulum and ribosomes found in the cytoplasm of neurons. They are responsible for the synthesis of proteins necessary for neural function.

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

About Anatomical Models:

These are developed with resin replication technology, supplying the scarcity of natural 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:

- Dendrites
- Cell Membrane
- Rough Endoplasmic Reticulum
- Nuclear Pores
- Chromatin
- Nuclear Membrane
- Golgi Complex
- Node of Ranvier
- Synapse
- Smooth Endoplasmic Reticulum
- Nissl bodies
- Mitochondria



- Lipid Droplet
- Neuron Cell Body
- Axon