

MICROSCOPIC ANATOMY: BRAIN STEM

Histological Reference & Identification Key

[Cross-Section Diagram: Midbrain]

Key Nuclei & Tracts

Structure	Cell Type / Feature
Substantia Nigra	Neuromelanin-containing neurons
Red Nucleus	Multipolar ferruginous neurons
Locus Coeruleus	Pigmented Noradrenergic cells
Reticular Formation	Isodendritic core neurons

Cranial Nerve Nuclei (Microscopic Locations)

- Edinger-Westphal
- Oculomotor (CN III)
- Trochlear (CN IV)
- Trigeminal (CN V)
- Abducens (CN VI)
- Facial (CN VII)
- Vestibular (CN VIII)
- Hypoglossal (CN XII)

[Cross-Section Diagram: Medulla]

Histological Indicators

White Matter: Compacted myelinated axon bundles (Pyramids, Lemnisci).

Gray Matter: Organized clusters (Nuclei) and diffuse networks (Reticular).

Reference Template 102-B Educational Use Only