

Neuromuscular Autoantibodies: Classification & Features

Antibody				Antigen		Disease		
Class	Location	Type	Pathogenic properties	Features	Antigen Examples	Neuromuscular Disease Examples	Associations, Systemic	Common treatments
IgG	Serum	Polyclonal	Often	Protein Cell surface membrane	Receptors: AChRs Muscle; Neuron Ca ⁺⁺ ion channels K ⁺ channel complex	Myasthenia gravis Autonomic PN LEMS Isaac's	Neoplasms Thymoma Adeno Ca Small cell lung	Corticosteroids T-cell suppressants IVIg Plasma Exchange
IgG	Serum	Polyclonal	Possible	Carbohydrate Glycolipid	Gangliosides GM1 GQ1b GD1b	AMAN Miller-Fisher Sensory, Acute	Infection, Prodromal	Disease often monophasic
IgG	Serum	Polyclonal	Few	Protein Intracellular	tRNA synthetases SRP ANCA FGFR3	IMPP Polymyopathy, immune Vasculitis Neuropathy, Sensory	Organ system disease, or Neoplasm, or None	Corticosteroids T-cell suppressants Rituximab
IgG	Serum + CSF	Polyclonal	No	Protein Intracellular	Hu (Neuron nuclei) CRMP5	Neuronopathy Sensory; Autonomic Polyneuropathy	Neoplasms Small cell lung Gynecologic	Screen for & Treat Associated neoplasm
IgG₄	Serum	Polyclonal	Possible	Protein Cell surface, or Extracellular	MuSK Neurofascins 140 155 Contactin-1 Lgi1 Caspr2	MG-MuSK PN Sensory ataxia, subacute Demyel +: Tremor ; CNS Demyel PN : IVIg resistant Encephalopathy ± PN Neuromyotonia ; Autonomic	None	Rituximab (q 1-6 mo) Corticosteroids
IgM	Serum	Monoclonal or Polyclonal	Possible	Carbohydrate Glycolipid or Glycoproteins	GM1 MAG TS-HDS GD1b	Motor PN Demyelinating PN Sensory PN Sensory PN, Ataxic	Neoplasms M-protein	Rituximab (IgM ↓) Intravenous Ig (Conduction block) Cyclophosphamide
IgM, IgG, or IgA	Serum	Monoclonal	Some	Not identified		Polyneuropathy	POEMS Cryoglobulins Waldenström's	Radiation; Chemo; Stem cell Rituximab; Chemo