

Order Guide for Neurologic Autoimmune/Paraneoplastic Panels (updated 6/9/2023)

- The conventional "paraneoplastic panel" is no longer orderable and has been replaced by expanded autoimmune panels that are targeted to symptoms.
- Clinical guideline: Testing should be reserved for patients with an APE2 score of 4 or greater.
- Serum has higher sensitivity and should be tested first.
- CSF testing be reserved for second line testing when there is high clinical suspicion and negative serum results.

Autoimmune/Paraneoplastic Antibody Panel Order	Order code	Plasma membrane specificities												Nuclear and cytoplasmic specificities																		
		NMDA-R	LGI1	CASPR2	AMPA-R	GABA-B-R	DPPX	mGluR1	VGKC-Complex	P/Q Type VGCC	ACHR Ganglionic	PCA-TR	IgLON5	ANNA-1 (Hu)	ANNA-2 (Ri)	ANNA-3	AGNA (SOX1)	PCA-1 (Yo)	PCA-2	CRMP-5 (CV2)	Amphiphysin	GAD65	GFAP	GRAF1	ITPR1	NIF	KLHL11	Septin-5	Septin-7	AP3B2	Neurochondrin	
Encephalopathy, Serum	12690	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●			●			●		●	
Encephalopathy, CSF	12689	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●			●			●		●	
Dementia, Serum	12688	●	●	●	●	●	●	●				●	●	●	●	●	●		●	●	●	●	●			●					●	
Dementia, CSF	12687	●	●	●	●	●	●	●				●	●	●	●	●	●		●	●	●	●	●			●					●	
Epilepsy, Serum	12692	●	●	●	●	●	●	●				●		●	●	●	●		●	●	●	●	●								●	
Epilepsy, CSF	12691	●	●	●	●	●	●	●				●		●	●	●	●		●	●	●	●	●								●	
Movement Disorders, Serum	14900	●	●	●	●	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Movement Disorders, CSF	14901	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Dysautomia, serum only	14899		●	●			●			●			●					●	●											●		
OLD Paraneoplastic, Serum	obsolete							●*	●	●			●	●	●	●	●	●	●	●	●											
OLD Paraneoplastic, CSF	obsolete										●			●	●	●	●	●	●	●	●											
SMALL PANELS AND SINGLE TESTS																																
CRMP-5 antibody	994																			●												
GAD65 antibody	13403																					●										
Hu, Ri, Yo Antibody Panel	994												●	●			●															
NMDA-R antibody, CSF only	994	●																														
VGCC Panel (Voltage-gated calcium channel, P/Q and N-type)	994								●																							
Striational antibody	14228																															
VGKC-Complex antibody*	obsolete	*VGKC antibody has been replaced by LGI1 and CASPR2 which are more sensitive and specific for autoimmune neurologic disorders. VGKC is never positive when these two tests are negative. On its own, VGKC is not clinically relevant.																														

Antibody Prevalence in Encephalopathy Score (APE2)*

Clinical history	Points
New onset, rapidly progressive mental status changes that developed over 1–6 weeks or new onset seizure activity (within 1 year of evaluation) +1	
Neuropsychiatric changes; agitation, aggressiveness, emotional lability +1	
Autonomic dysfunction [sustained atrial tachycardia or bradycardia, orthostatic hypotension (≥ 20 mm Hg fall in systolic pressure or ≥ 10 mm Hg fall in diastolic pressure within 3 minutes of quiet standing), hyperhidrosis, persistently labile blood pressure, ventricular tachycardia, cardiac asystole, or gastrointestinal dysmotility] +1	
Viral prodrome (rhinorrhea, sore throat, low-grade fever) to be scored in the absence of underlying systemic malignancy within 5 years of neurological symptom onset +2	
Faciobrachial dystonic seizures +3	
Facial dyskinesias, to be scored in the absence of faciobrachial dystonic seizures +2	
Seizure refractory from at least to two anti-seizure medications +2	
CSF findings consistent with inflammation (elevated CSF protein >50 mg/dL and/or lymphocytic pleocytosis >5 cells/uL, if the total number of CSF red blood cell count is $<1,000$ cells/uL.) +2	
Brain MRI suggesting encephalitis (T2/FLAIR hypersensitivity restricted to one or both medial temporal lobes, or multifocal in grey matter, white matter or both compatible with demyelination or inflammation) +2	
Systemic cancer diagnosed within 5 years of neurological symptom onset (excluding cutaneous squamous cell carcinoma, basal cell carcinoma, brain tumor, cancer with brain metastasis) +2	
TOTAL SCORE	

Score Guide:

≥ 4 : Presence of neural specific antibodies clinically validated to have an association with autoimmune encephalopathy or epilepsy is likely.

< 4 : Presence of neural specific antibodies clinically validated to have an association with autoimmune encephalopathy or epilepsy is unlikely.

*Dubey D, Kothapalli N, McKeon A, et al: Predictors of neural-specific autoantibodies and immunotherapy response in patients with cognitive dysfunction. J Neuroimmunol 2018 Oct;323:62-72.