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**Lab Dept:** Serology

**Test Name:** FOLATE RECEPTOR ANTIBODY

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***General Information***

**Lab Order Codes:** FRA

**Synonyms:** Vitamin B9 Receptor Antibody

**CPT Codes:** 83520 – Immunoassay for analyte other infectious agent, antibody or antigen; quantitative, not otherwise specified

**Test Includes:** Folate Receptor Antibody levels for IgG and IgM. An interpretation will also be included.

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***Logistics***

**Test Indications:** Folate receptor antibody is useful for investigating the cause of a cerebral folate deficiency. Clinical folate supplementation reduces the risk of neural tube defect (NTD) pregnancy, and folic acid has been used to correct cerebral folate deficiency (CFD) in children with developmental disorders. In the absence of systemic folate deficiency, the discovery of autoantibodies (AuAbs) to folate receptor  $\alpha$  (FR $\alpha$ ) that block the uptake of folate offers one mechanism to explain the response to folate in these disorders. The association of FR $\alpha$  AuAbs with pregnancy-related complications, CFD syndrome, and autism spectrum disorders and response to folate therapy is highly suggestive of the involvement of these AuAbs in the disruption of brain development and function via folate pathways.

**Referred to:** Medical Neurogenetics (MNG test: MET22)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 weeks

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** SST (Gold, marble or red)  
Alternate: Green (NaHep) tube

<b>Draw Volume:</b>	1 mL (Minimum: 0.3 mL) blood
<b>Processed Volume:</b>	0.25 mL (Minimum: 0.1 mL) serum/plasma
<b>Collection:</b>	Routine blood collection
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum/plasma and store frozen at -20 degrees Celsius. Ship at frozen temperatures.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Mislabeled or unlabeled specimen

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***Interpretive***

<b>Reference Range:</b>		<b>Reference Range (pmol/mL)</b>
	Folate Receptor IgG	< or =460
	Folate Receptor IgM	< or =7.5

**Critical Values:** N/A

**Limitations:** This assay does NOT differentiate between binding, blocking, and modulating antibodies. Although increased levels of anti-folate receptor antibody have been reported to be associated with susceptibility to cerebral folate deficiency (CFD), a causal relationship between CFD and anti-folate receptor antibody subcategories (binding, blocking, modulating, has not been established.

For patient samples sent to the laboratory , an important consideration for false positive or false negative test results is the improper labeling of the patient's sample. If test results are inconsistent with the clinical presentation, please call to discuss the case and/or submit a second sample for confirmatory testing.

This test was developed and its performance characteristics determined by Medical Neurogenetics, LLC. It has not been cleared or approved by the US FDA.

**Methodology:** ELISA

**References:** [Medical Neurogenetics](#) (May 2018)