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Name:	XXX	Age: 5 yrs	Sex: Male
Sampling date:		Received on: xx/xx/xxxx	
Ref Dr.:	Dr. XXX	File # : xxxx/xx	
Hosp./City:	XXX		

Folate Receptor Autoantibodies IgG (FRAT)

Date: 15/10/2025
Method: ELISA
Sample: Serum

	Metabolite	Observed Value	Reference range in Indian population (n=60)
1	Folate Receptor Autoantibodies IgG	15.08 ng/ml	< 50 ng/ml

Impression: Normal levels of Folate receptor antibodies IgG.

Advise: Please correlate clinically and with CSF 5- MTHF levels.

Notes:

- **Background:** Folate receptor antibody test, also known as the Folate Receptor Autoantibody Test (FRAT), is a blood test that screens for autoantibodies that block or interfere with the transport of folate into the brain and other tissues. The presence of these autoantibodies can lead to a condition called cerebral folate deficiency, which can cause symptoms like developmental delays, seizures, and other neurological and neuropsychiatric disorders.
- **Conditions Associated with the Test**
  1. **Cerebral Folate Deficiency (CFD):** This condition occurs when folate isn't properly transported to the brain, leading to a deficiency of the active form of folate in the CSF.
  2. **Autism Spectrum Disorder (ASD):** High prevalence of FRa autoantibodies has been observed in children with ASD.
  3. **Neurodevelopmental & Neuropsychiatric Disorders:** The presence of these autoantibodies is linked to other disorders, including certain types of seizure disorders, lack of speech development, developmental delays and developmental regression and neuropsychiatric or autoimmune conditions including depression, schizophrenia, or bipolar disorder.
  4. **Fertility Issues:** A folate receptor immune disorder can contribute to some fertility difficulties and miscarriages.
- **ASD patients with positive FRAT have shown levels >80 ng/ml in our cohort and levels between 50-80 ng/ml are considered borderline. Correlation with CSF 5-MTHF is recommended as there are other causes of cerebral folate deficiency apart from folate receptor antibodies.**

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