MAYO CLINIC LABORATORIES

Test Definition: RUFI

Rufinamide, Serum

Overview

Useful For

Monitoring serum rufinamide concentrations, assessing compliance, and adjusting dosage in patients receiving other drugs that interact pharmacokinetically with rufinamide (ie, drugs that induce liver CYP3A4 enzymes) and may be helpful in those who are receiving hemodialysis

Method Name

Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube:
Preferred: Red top
Acceptable: Serum gel
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Serum
Collection Instructions:
1. Collect blood immediately before next scheduled dose.
2. For sustained-release formulations ONLY, collect blood a minimum of 12 hours after last dose.
3. Within 2 hours of collection, centrifuge and aliquot serum into plastic vial.

Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:
-Therapeutics Test Request (T831)
-Neurology Specialty Testing Client Test Request (T732)

Specimen Minimum Volume

Serum: 0.5 mL

Reject Due To

Gross hemolysis	OK

Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

Clinical & Interpretive

Clinical Information

Rufinamide is a new antiepileptic drug approved by the Food and Drug Administration as an add-on treatment for seizures associated with Lennox-Gastaut syndrome in children aged 4 years and older, and for the treatment of focal seizures in adults and adolescents. Its mechanism of action is not completely understood, but it is believed to work by prolonging the inactive state of sodium channels, therefore limiting excessive firing of sodium-dependent action potentials. The commonly observed side effects are headache, dizziness, fatigue, somnolence, and nausea.

Reference Values

5.0-30.0 mcg/mL

Interpretation

The reference interval is broad and represents the concentrations observed to be associated with the greatest drug efficacy without side effects or toxicity.

Cautions

No significant cautionary statements

Clinical Reference

1. Krasowski MD. Antiepileptic drugs. Therapeutic drug monitoring of the new generation drugs. Clinical Laboratory News. 2013;39(6):8-10

2. Aneja S, Sharma S. Newer anti-epileptic drugs. Indian Pediatr. 2013;50(11):1033-40. doi:10.1007/s13312-013-0284-9

3. Hiemke C, Bergemann N, Clement HW, et al. Consensus guidelines for therapeutic drug monitoring in neuropsychopharmacology: Update 2017. Pharmacopsychiatry. 2018;51(1-02):9-62. doi:10.1055/s-0043-116492

Performance

Method Description

Deuterated internal standard in methanol is added to the standards, controls, and patient serum samples. The samples are then centrifuged, and the supernatant further diluted with mobile phase A and analyzed by ultrafast online solid-phase extraction tandem mass spectrometry.(Unpublished Mayo method)

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PDF Report
No

Day(s) Performed
Tuesday, Thursday, Saturday

Report Available
3 to 5 days

Specimen Retention Time
14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Superior Drive

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
80210

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
RUFI	Rufinamide, S	59323-6

Result ID	Test Result Name	Result LOINC® Value
63030	Rufinamide, S	59323-6