MAYO CLINIC LABORATORIES

Test Definition: RUFI

Rufinamide, S

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

Collection Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions:

1. Draw blood immediately before next scheduled dose.

2. For sustained-release formulations ONLY, draw blood a minimum of 12 hours after last dose.

3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Forms

If not ordering electronically, complete, print, and send a Therapeutics Test Request (T831) with the specimen.

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK
Gross icterus	OK

Specimen Minimum Volume

0.5 mL

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 add-on treatment for seizures associated with Lennox-Gastaut syndrome in children 4 years of age or 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. Krazowski MD: Antiepileptic drugs. Therapeutic drug monitoring of the new generation drugs. Clinical Laboratory News. 2013 Jun;39(6):8-10

2. Aneja S, Sharma S: Newer anti-epileptic drugs. Indian Pediatr. 2013 Nov 8;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 Jan;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)

PDF Report

No

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees & Codes

Test Classification

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test 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	Reporting Name	LOINC®
63030	Rufinamide, S	59323-6