

Overview

Useful For

Confirming the presence of dexamethasone in serum

Confirming the cause of secondary adrenal insufficiency

This test is **not useful** as the sole basis for a diagnosis or treatment decisions.

Method Name

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

NY State Available

Yes

Specimen

Specimen Type

Serum

Ordering Guidance

To detect the metabolite of fluticasone or Flonase, order 17BFP / Fluticasone 17-Beta-Carboxylic Acid, Random, Urine.

For synthetic glucocorticoid analyte screen, order SGSS / Synthetic Glucocorticoid Screen, Serum.

Specimen Required

Collection Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Submission Container/Tube: Plastic vial

Specimen Volume: 2 mL

Collection Instructions:

1. Draw blood between 7:30 a.m. and 9:00 a.m. the morning following an evening dose.
2. Centrifuge and aliquot serum into plastic vial within one hour of collection and freeze immediately.

Forms

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

Specimen Minimum Volume

0.6 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	72 hours	
	Refrigerated	7 days	

Clinical & Interpretive

Clinical Information

Synthetic glucocorticoids are widely used and have an important clinical utility both as antiinflammatory and immunosuppressive agents. The medical use of these agents, as well as their surreptitious use, can sometimes lead to a confusing clinical presentation. Patients exposed to these steroids may present with clinical features of Cushing syndrome but with suppressed cortisol levels and evidence of hypothalamus-pituitary-adrenal axis suppression.

Reference Values

Baseline: <30 ng/dL
8:00 a.m. following 1 mg Dexamethasone, previous evening: >100 ng/dL
8:00 a.m. following 8 mg Dexamethasone, (4 x 2 mg doses) previous day: >800 ng/dL

Interpretation

This test will screen for, and quantitate if present, the synthetic glucocorticoid, dexamethasone.

The presence of this synthetic glucocorticoid in serum indicates the current or recent use of this compound.

Cautions

Lack of detection does not preclude use of dexamethasone because adrenal suppression may persist for some time after the exogenous steroid is discontinued.

Clinical Reference

1. Genere N, Kaur RJ, Athimulam S, et al. Interpretation of abnormal dexamethasone suppression test is enhanced with use of synchronous free cortisol assessment. J Clin Endocrinol Metab. 2021;107(3):e1221-e1230
doi:10.1210/clinem/dgab724

2. Cave A, Arlett P, Lee E. Inhaled and nasal corticosteroids: factors affecting the risks of systemic adverse effects. Pharmacol Ther. 1999;83(3):153

3. Bijlsma JW, van Everdingen AA, Huisman M, et al. Glucocorticoids in rheumatoid arthritis: effects on erosions and bone. Ann N Y Acad Sci. 2002;966:82-90. doi:10.1111/j.1749-6632.2022.tb04205.x

4. Genere N, Kaur RJ, Athimulam S, et al. Interpretation of abnormal dexamethasone suppression test is enhanced with use of synchronous free cortisol assessment. J Clin Endocrinol Metab. 2022;107(3):e1221-e1230.

doi:10.1210/clinem/dgab724

Performance

Method Description

Dexamethasone is extracted from serum and measured by liquid chromatography (high-resolution accurate-mass) mass spectrometry.(Unpublished Mayo method)

PDF Report

No

Day(s) Performed

Tuesday, Thursday

Report Available

2 to 10 days

Specimen Retention Time

3 months

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

80299

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
DEXA	Dexamethasone, S	14062-4

Result ID	Test Result Name	Result LOINC® Value

609439	Dexamethasone, S	14062-4
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