Test Definition: FNEOS

Neopterin, Serum

Overview

Useful For

Increased levels of neopterin are found during impaired renal function and viral infection in transplant patients. Elevated levels are also indicators for conditions related to impaired cellular immunity.

Method Name

Enzyme immunoassay (EIA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Specimen Type: Serum

Container/Tube: Red or SST

Specimen Volume: 0.8 mL

Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.8 mL serum **light protected** in a screw-capped vial (Supply T192 amber vial), shipped frozen.

Specimen Minimum Volume

0.5 mL

Reject Due To

Hemolysis	Mild OK; Gross Reject
Lipemia	Mild OK; Gross Reject
Icterus	Mild OK; Gross Reject
Other	Not light protected specimens

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	LIGHT PROTECTED
	Refrigerated	72 hours	LIGHT PROTECTED

Clinical and Interpretive

Clinical Information

Neopterin, a pyrazolopyridine compound, is produced by macrophages after induction by interferon ? and serves as a marker of cellular immune system activation. Measurable levels of neopterin have been detected in both the serum and urine of patients suffering from various types of malignanciesand viral infections. Changes in neopterin concentrations in serum or urine can predict complications such as graft rejection in organ transplant recipients. Elevated neopterin levels are found in autoimmune disorders such as rheumatoid arthritis and systemic lupus erythematosus (SLE). Neopterin levels can be used as prognostic predictors for certain types of malignancies. Measurement of neopterin levels has particular value for monitoring patients infected with HIV. Neopterin is eliminated primarily in the urine, so evaluation of urinary neopterin levels may be useful in assessing activation of the cellular immunity system even in the absence of typical clinical symptoms, since a correlation has been observed with the course of diseases involving cellular immunity activation and urinary neopterin levels.

Reference Values

Adults: <2.5 ng/mL

Clinical Reference

Fahey JL, Taylor JM, Detels R, et al. The prognostic value of cellular and serologic markers in infection with human immunodeficiency virus type I.N Engl J Med.1990 Jan; 322(3):166-172.PubMed 1967191

Fuchs D, Hausen A, Reibnegger G, Werner ER, Dierich MP, Wachter H. Neopterin as a marker for activated cell-mediated immunity: Application in HIV infection.Immunol Today.1988 May; 9(5):150-155.PubMed 3076770

Jacobson MA, Bacchetti P, Kolokathis A, et al. Surrogate markers for survival in patients with AIDS and AIDS related complex treated with zidovudine.BMJ.1991 Jan 12; 302(6768):73-78.PubMed 1671651

Wachter H, Fuchs D, Hausen A, Reibnegger G, Werner ER. Neopterin as a marker for activation of cellular immunity: Immunologic basis and clinical application.Adv Clin Chem.1989; 27:81-141.PubMed 2667296

Performance

PDF Report

No

Day(s) Performed

Monday

Report Available

1 to 12 days

Performing Laboratory Location

LabCorp Burlington

Fees and 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 Regional Manager. For assistance, contact Customer Service.

CPT Code Information

83520

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
FNEOS	Neopterin, Serum	34908-4

Result ID	Test Result Name	Result LOINC Value
FNEOS	Neopterin, Serum	34908-4