

Overview

Useful For

Detecting vasoactive intestinal polypeptide-producing tumors in patients with chronic diarrheal diseases

Method Name

Radioimmunoassay (RIA)

NY State Available

Yes

Specimen

Specimen Type

Plasma EDTA

Ordering Guidance

This test **should not be requested** on patients who have recently received radioactive material.

Specimen Required

Patient Preparation: Fasting (8 hours)

Collection Container/Tube: Lavender top (EDTA)

Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions: Centrifuge and aliquot plasma into a plastic vial. Freeze immediately.

Forms

[If not ordering electronically, complete, print, and send an Oncology Test Request](#) (T729) with the specimen.

Specimen Minimum Volume

0.55 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	90 days	

Clinical & Interpretive

Clinical Information

Vasoactive intestinal polypeptide (VIP) was originally isolated from porcine small intestine and was recognized by its potent vasodilator activity. This brain/gut hormone has widespread distribution and is present in neuronal cell bodies localized in the central nervous system, digestive, respiratory, and urogenital tracts, and exocrine, thyroid, and adrenal glands. VIP has a wide scope of biological actions. The main effects of VIP include relaxation of smooth muscle (bronchial and vascular dilation), stimulation of gastrointestinal water and electrolyte secretion, and release of pancreatic hormones.

VIP-producing tumors (VIPomas) are rare; most (90%) are located in the pancreas. Watery diarrhea, hypokalemia, and achlorhydria are key symptoms.

Reference Values

<75 pg/mL

Interpretation

Values above 75 pg/mL may indicate the presence of an enteropancreatic tumor causing hypersecretion of vasoactive intestinal polypeptide (VIP).

Values above 200 pg/mL are strongly suggestive of VIP-producing tumors (VIPoma).

VIPoma is unlikely with a 24-hour stool volume below 700 mL.

Cautions

This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. A recommended time period before collection cannot be made because it will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive samples received in the laboratory will be held and assayed after the radioactivity has sufficiently decayed. This will result in a test delay.

Clinical Reference

- Smith SL, Branton SA, Avino AJ, et al: Vasoactive intestinal polypeptide secreting islet cell tumors: a 15-year experience and review of the literature. *Surgery*. 1998 Dec;124(6):1050-1055
- Ghaferi AA, Chojnacki KA, Long WD, et al: Pancreatic VIPomas: subject review and one institutional experience. *J Gastrointest Surg*. 2008 Feb;12(2):382-393
- Eisenhofer G, Grebe S, Cheung NK, et al: Monoamine-producing tumors. In: Rifai N, Horvath AR, Wittwer CT, eds. *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics*. 6th ed. Elsevier; 2018:1421

Performance

Method Description

Vasoactive intestinal polypeptide (VIP) in the patient sample competes with labeled ([125]I) VIP for a limited number of primary antibody binding sites during a 24-hour incubation. Antibody-bound VIP is separated from the unbound portion by a goat anti-rabbit secondary antibody. Centrifugation brings down the heavy antibody complexes while unbound antigen remains in solution and is discarded. The amount of labeled antigen bound to the antibody is inversely proportional to the amount of VIP present in the patient sample. The (125)I signal is counted on a gamma counter and the counts per minute are used to calculate percent of maximum binding and construct a standard curve.(Unpublished Mayo method)

PDF Report

No

Day(s) Performed

Monday, Wednesday

Report Available

4 to 8 days

Specimen Retention Time

3 months

Performing Laboratory Location

Rochester

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

84586

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
VIP	Vasoactive Intestinal Polypeptide,P	3125-2

Result ID	Test Result Name	Result LOINC® Value
8150	Vasoactive Intestinal Polypeptide,P	3125-2