Lab Dept: Chemistry

Test Name: COPEPTIN PROAVP

General Information

Lab Order Codes: CPAVP

Synonyms: ADH; Anti-Diuretic Hormone; Arginine Vasopressin; AVP

CPT Codes: 84588 - Vasopressin

Test Includes: Copeptin proAVP reported in pmol/L

Logistics

Test Indications: The investigation of the differential diagnosis of patients with water balance disorders, including Diabetes Insipidus (DI) in conjunction with osmolaltity and hydration status.

May aid in the evaluation of cardiovascular disease in conjuction with other cardiac markers.

Note: Copeptin (also known as Copeptin proAVP or Copeptin AVP) and arginine vasopressin (AVP) are derived from the same precursor peptide. Copeptin has been proposed as a more stable, potentially superior, surrogate marker of AVP in the assessment of water balance disorders. Both copeptin and AVP are responsive to osmotic stimuli and increase in response to water deprivation. The determination of the underlying disease pathology in patients with polyuria and altered plasma osmolality is often difficult. Polyuria can be related to insufficient AVP (central diabetes insipidus), reduced sensitivity to AVP (nephrogenic diabetes insipidius), or excessive water intake. Measurement of plasma copeptin concentration has been shown to be useful in investigation of these AVP-related disorders.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Clinical Laboratories (MML Test: CPAVP)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 2 days (Performed Monday – Saturday)

Special Instructions: See Patient Preparation

Specimen

Specimen Type:	Whole blood
Container:	Lavender (EDTA) top tube
Draw Volume:	1.5 mL blood
Processed Volume:	0.5 mL (Minimum: 0.3 mL) EDTA plasma
Collection:	Routine blood collection
Special Processing:	Lab Staff: Centrifuge specimen, remove plasma aliquot. Do not submit in original collection container. Store and ship at refrigerated temperatures. Forward promptly.
Patient Preparation:	For water-deprived testing, have the patient fast and thirst for at least 8 hours (no liquids, including water are allowed).
Sample Rejection:	Mislabeled or unlabeled specimens

Interpretive

Reference Range:	Non-water deprived, non-fasting pediatric patients: <14.5 pmol/L Non-water deprived, non-fasting adults: <15.2 pmol/L Water deprived, fasting adults: <13.1 pmol/L
Critical Values:	N/A
Limitations:	Sepsis, severe sepsis, septic shock, lower respiratory tract infections and COPD, cardiovascular diseases, ie, chronic heart failure, may increase copeptin concentrations. AVP receptor antagonist therapies and other diseases in which AVP has been shown to play an important pathophysiologic role may also increase copeptin concentration. In some cases bronchial carcinoma may lead to ectopic copeptin secretion. Mixed forms of DI can exist, and both central and peripheral DI may be incomplete, complicating the interpretation of results. Some patients who have been exposed to animal antigens, either in the environment or as part of treatment or imaging procedures, may have circulating anti-animal antibodies present. These antibodies may interfere with the assay reagents to produce unreliable results.
Methodology:	Immunofluorescent Assay

References: Mayo Clinical Laboratories April 2019