

COPEPTIN

(SURROGATE OF
MEASURE OF ANTI-
DIURETIC HORMONE)

PLASMA/
SERUM

Orderable - COPEP

Turnaround Time: 5 days

Alternate Name(s):

ADH
Antidiuretic hormone
Vasopressin
Arginine Vasopressin
AVP
ProAVP

Specimen:

Adult	Pediatric
4.5 mL Light Green top (Li-Heparin) Vacutainer tube	0-2 years: 0.5 mL Light Green top (Li-Heparin) Microtainer 2-10 years: 3 mL Light Green top (Li-Heparin) Vacutainer tube
Red, Gold, or Lavender (EDTA) top tubes are also acceptable.	

Collection Information:

Minimum volume of plasma or serum required is 500 µL for adult samples or 250 µL for pediatric samples.

Reference Ranges:

Osmolality (mOsm/kg)	Copeptin Reference Interval (pmol/L)
270-280	≤ 11.6
281-285	≤ 13.7
286-290	1.5-15.3
291-295	2.3-24.5
296-300	2.4-28.2

From Timper K *et al.*, J Clin Endocrinol Metab 2015; 100(6):2268-2274:



Laboratory:
Endocrinology Lab



Requisition:
GENERAL LABORATORY
REQUISITION



Method of Analysis:
Thermo Fisher
Fluorescent Immunoassay



Test Schedule:
Monday - Friday
0800-1600

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- a baseline copeptin ≥ 21.4 pmol/L identified nephrogenic diabetes insipidus with 100% sensitivity and specificity
- following a combined water deprivation/hypertonic saline infusion test, a copeptin level ≥ 4.9 pmol/L identified primary polydipsia and a copeptin level < 4.9 pmol/L identified complete or partial central diabetes insipidus, with 94-96% sensitivity and specificity

From Winzeler B *et al.*, Lancet 2019; 394(10198):587-595:

- at 60 min following an arginine stimulation test, a copeptin level ≥ 3.8 pmol/L identified primary polydipsia and a copeptin level < 3.8 pmol/L identified complete or partial central diabetes insipidus, with 93% sensitivity and 92% specificity

PEDIATRIC:

Non-water-deprived pediatric subjects: copeptin reference interval < 14.5 pmol/L

As suggested by a small study involving 15 children with polyuria and polydipsia from Tuli G *et al.*, Clin Endocrinol (Oxf) 2018; 88(6):873-879:

- following a water deprivation test:
 - ♣ copeptin > 20 pmol/L: nephrogenic diabetes insipidus
 - ♣ copeptin 5-20 pmol/L: primary polydipsia
 - ♣ copeptin 2.2-4.9 pmol/L: diagnosis depends on plasma and urine osmolality
 - ♣ copeptin < 2.2 pmol/L: complete central diabetes insipidus

Storage and Shipment:

Store and ship plasma or serum frozen.

Comments:

Osmolality measurement is no longer performed as part of copeptin testing. To aid in interpretation of copeptin results, it is recommended that osmolality be ordered separately and tested at the laboratory where sample collection is performed.