Clinical Use
• Differential diagnosis of primary hyperaldosteronism due to adrenal adenoma

Reference Range
Adults (8-10 AM) ng/dL ng/dL
Upright 5-80
Supine 4-37
Children
Premature infants (31-35 wk) ≤380
Term infants (3 d) ≤942
ACTH stimulation Baseline 60 min
1-12 mo 5-310 67-470
1-5 y 7-155 49-370
6-12 y 10-74 79-360
Tanner II-III
Males 5-73 91-1475
Females 11-82 69-195
Tanner IV-V
Males 14-62 73-205
Females 11-68 82-320


Interpretive Information
• Adrenal adenoma
• Adrenal P-450c11ase deficiency
• Addison’s disease

Clinical Background
Primary aldosteronism should be suspected whenever a patient has the triad of hypertension, hypokalemia, and inappropriate renal potassium wasting. The biggest challenge is the differential diagnosis between the more common adrenal adenoma and bilateral hyperplasia. Because adrenal adenomas increase the circulating levels of 18-hydroxycorticosterone (18-OH B), serum levels of 18-OH B are useful to differentiate them from bilateral adrenal hyperplasia. The cutoff point appears to be about 50 ng/dL of serum. Most values are around 100 ng/dL. The higher the level of this precursor, the greater the possibility that an adrenal adenoma is present.

Method
• Extraction, chromatography, radioimmunoassay (RIA)
• Analytical sensitivity: 7 ng/dL

Specimen Requirements
3 mL refrigerated serum
1.1 mL minimum
No additive red top preferred
SST red top acceptable