

SIEMENS

ADVIA Centaur Active-B12 Assay

Upgrade your B12 testing

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Vitamin B12 (cobalamin) plays an important role in DNA synthesis and neurologic function. Deficiency can lead to a wide spectrum of hematologic and neuropsychiatric disorders that can often be reversed by early diagnosis and prompt treatment.

Vitamin B12 deficiency is an increasing global health concern.

- World Health Organization (WHO) estimates B12 deficiency affects millions of individuals across all ages.¹
- Estimation of prevalence may be as high as 10–15% in those over age 60.^{2,3}

In addition to the elderly, patients with suspected vitamin B12 deficiency include:

- Persons with unexplained anemia or neurological symptoms
- Patients with disorders impeding nutrient absorption (celiac disease and Crohn's disease)
- Pregnant women
- Vegetarians and vegans
- Regular users of PPIs or acid suppressing drugs
- Patients taking diabetes drugs (metformin)

Many individuals without overt clinical symptoms may be metabolically deficient and thus could be at risk of potentially irreversible neurological damage, making early and accurate diagnosis vital.¹

The primary analysis of vitamin B12 deficiency is the measurement of serum cobalamin (vitamin B12).⁴ These commonly used tests measure total vitamin B12, which is found in blood bound to two carrier proteins: haptocorrin and transcobalamin. When B12 is bound to transcobalamin it is referred to as holotranscobalamin (holoTC).

Only B12 in this form is available to other tissues for physiologic use.^{1,5} Because this small fraction is the only form that is bioavailable, it is also referred to as active-B12.



Why Active-B12?

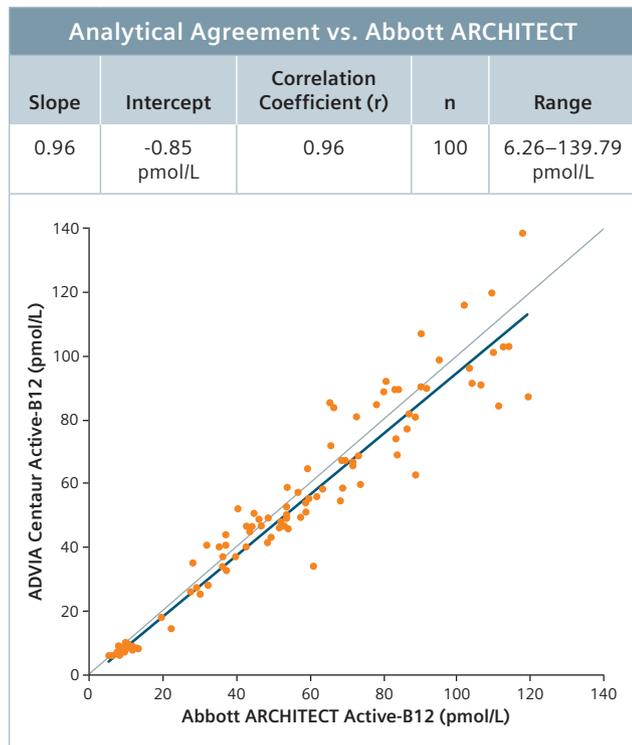
The ADVIA Centaur® Active-B12 (AB12) assay from Siemens Healthcare measures holoTC in the blood—the only form of vitamin B12 that is taken up and used by cells of the body—resulting in improved sensitivity, and specificity of B12 status.

- Identify anemia sooner, especially in pregnancy, with an optimal early marker of vitamin B12 status
- Measure the biologically active form of B12, delivering confidence with improved sensitivity and specificity
- Minimize interference with intrinsic factor blocking antibody (IFBA)
- Complete anemia testing panel on one trusted platform

ADVIA Centaur Active-B12 Assay Specifications

The ADVIA Centaur® Immunoassay System from Siemens offers easy consolidation and automation of routine, specialty, and STAT testing in any laboratory. Make your lab even more efficient by consolidating your anemia testing onto the ADVIA Centaur system.

| ADVIA Centaur Active-B12 Performance Summary | | | | | | |
|--|---------------|------------------|--|----------------------|-------------------|----------------------|
| Sample Type | Sample Volume | Assay Range | Detection Capability | Calibration Interval | Onboard Stability | Time to First Result |
| Serum | 50 µL | 5.0–146.0 pmol/L | LOB: 0.74 pmol/L LOD: 1.08 pmol/L LOQ: 5.00 pmol/L | 44 days | 44 days | 47 min |



| Ordering Information | |
|----------------------|---|
| SMN No. | Contents |
| 10995088 | ADVIA Centaur AB12 assay 100-test includes: 1 ReadyPack® primary reagent pack 1 ancillary pack 1 x 2.0 mL low calibrator 1 x 2.0 mL high calibrator |
| 10995091 | ADVIA Centaur AB12 quality control material 1 x 7.0 mL control 1 1 x 7.0 mL control 2 |
| 10492364 | Multi-diluent 13, 10 mL/pack |

References:

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- Forman PD, Becker K. B12 (Cobalamin) Deficiency. *Cortlandt Forum* 2006;19:86-8.
- Yetley EA, Pfeiffer CM, Phinney KW, et al. Biomarkers of vitamin B-12 status in NHANES: a roundtable summary. *Am J Clin Nutr* 2011;94: 313S-21S.
- Herrmann W, Obeid R. Causes and early diagnosis of vitamin B12 deficiency. *Dtsch Arztebl Int* 2008;105:680-5.

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