Adiponectin

CPT Code: 83520
Order Code: C314
ABN Requirement: No
Specimen: Serum
Volume: 1.0 mL
Minimum Volume: 0.5 mL
Container: Gel-barrier tube (SST)

Collection:

1. Collect and label sample according to standard protocols.
2. Gently invert tube 5 times immediately after draw. Do not shake.
3. Allow blood to clot 30 minutes.
4. Centrifuge for 10 minutes.

Fasting: Overnight fasting is required.

Transport: Store serum at 2°C to 8°C after collection and ship the same day per packaging instructions included with the provided shipping box.

Stability:

Ambient (15-25°C): 4 days
Refrigerated (2-8°C): 14 days
Frozen (-20°C): 28 days

Causes for Rejection: Specimens other than serum; improper labeling; samples not stored properly; samples older than stability limits

Methodology: Immunoturbidimetry

Turn Around Time: 2 to 4 days

Reference Range:

Adiponectin (µg/mL)		
BMI	**Male**	**Female**
<25 kg/m^2	2.3-15.2	2.9-30.4
25-30 kg/m^2	2.1-16.7	2.5-26.8
>30 kg/m^2	2.2-12.9	3.9-21.8

Intended Use: The adiponectin test may be performed on individuals at risk of metabolic syndrome or diabetes due to poor lifestyle choices.

Clinical Significance:

Adipocytes (fat cells) express a variety of proteins that function in the homeostatic control of glucose and lipid metabolism. Insulin regulates the translocation and secretion of many of these proteins in response to changes in energy balance. Adiponectin is a protein whose secretion from adipocytes is enhanced by insulin stimulation. It has been suggested that the development of non-insulin dependent (Type II) diabetes may involve dysregulation of adiponectin secretion. In support of the link between obesity and Type II diabetes, it has been shown that decreased expression of adiponectin correlates with insulin resistance, and that adiponectin appears to be a potent insulin enhancer linking adipose tissue and whole-body glucose metabolism.

- Individuals with low adiponectin levels have a 3X greater risk of developing metabolic syndrome[1].
- Men with two or more risk factors for metabolic syndrome and high adiponectin levels are half as likely to develop metabolic syndrome as men with low adiponectin levels[2].
- Individuals with low levels of adiponectin are up to 9X as likely to develop type 2 diabetes[3].
- Individuals with low adiponectin levels have a 2X increase in the prevalence of CAD[4].
- Adiponectin levels in the blood can be increased by thiazolidinediones,

such as pioglitazone[5].

References:

1. Chen SJ et al. *PLoS ONE*. 2012; 7: e45693.
2. Kotooka N et al. *Int J Cardiol*. 2012 Nov 26. pii: S0167-5273(12)01441-6. doi:10.1016/j.ijcard.2012.10.066. [Epub ahead of print].
3. Daimon M et al. *Diabetes Care*. 2003; 26: 2015-2020.
4. Kumada M et al. *Arterioscler Thromb Vasc Biol*. 2003; 23: 35-39.
5. McCoy RG et al. *Mayo Clin Proc.* 2012; 87: 561-570.