

HDL- C Direct (Homogeneous)

Analyte: HDL Cholesterol

Specimen Type: Serum, Inquire for additional option(s)

Optimum Volume: 0.5 mL

Stability:

2-8 Degrees C	-20 Degrees C	-70 Degrees C
1 week	3 months	2 years

Reporting Units: mg/dL

Method: Enzymatic

Biological or Clinical Significance:

HDL cholesterol (HDL-C) is a powerful inverse predictor of risk of coronary heart disease (CHD). Guidelines published by the American Heart Association (AHA) and the National Cholesterol Education Program (NCEP), which is sponsored by the National Heart, Lung and Blood Institute (NHLBI), recommend that physicians determine HDL-C levels together with the other tests in a standard lipid profile prior to administering dietary or drug therapies for CHD. The NCEP guidelines state that patients with high cholesterol or borderline high cholesterol with risk factors (e.g. HDL-C less than 40 mg/dL, hypertension, smoking, family history, etc.) be tested 2-3 times for HDL-C within 1-8 weeks. Subsequently, HDL-C and other lipid parameters should be measured 3-4 times per year to monitor the progress of therapy. Because of its protective effect, the NCEP has designated high HDL-C at or above 60 mg/dL as a negative risk factor.

Principle of Test Method:

This HDL Cholesterol assay is a homogeneous method for directly measuring serum HDL-C levels in serum or plasma without the need for any off-line pretreatment or centrifugation steps.

References:

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3. Havel RJ, Eder HA, Bragdon JH. The distribution and chemical composition of ultracentrifugally separated lipoproteins in human serum. J Clin Invest 1955; 34:1345.
4. Badimon JJ, Badimon L, Fuester V. Regression of atherosclerotic lesions by high-density lipoprotein plasma fraction in the cholesterol – fed rabbit. J Clin Invest 1990; 85:1234-41.
5. Executive summary of the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). JAMA. 2001; 285:22486-22497.
6. Shih WJ, Bachorick PS, Haga JR, Myers GL, Stein EA. Estimating the long-term effects of storage at -70 °C on cholesterol, triglyceride, and HDL-cholesterol measurements in stored sera. Clin Chem 2000; 46:351-364.
7. Warnick GR, Nauck M, Rifai N. Evolution of methods for measurement of HDL-cholesterol: from ultracentrifugation to homogeneous assays. Clin Chem. 2001; 47:1579-1596.