

Product Data Sheet

- Cat # LDLN11-N-1 Human Plasma low density lipoprotein (LDL) native, purified **Size:** 1 mg
- Cat # LDLN11-N-5 Human Plasma low density lipoprotein (LDL) native, purified **Size:** 5 mg

Low-density lipoprotein (LDL) is one of the five major groups of lipoproteins, which in order of size, largest to smallest, are chylomicrons, VLDL, IDL, LDL, and HDL, that enable transport of multiple different fat molecules, including cholesterol, within the water around cells and within the water-based bloodstream. Studies have shown that higher levels of type-B LDL particles (as opposed to type-A LDL particles) are associated with health problems, including cardiovascular disease. LDL is often informally called bad cholesterol, (as opposed to HDL particles, which are frequently referred to as good cholesterol or healthy cholesterol).

Each native LDL particle contains a single apolipoprotein B-100 molecule (Apo B-100, a protein that has 4536 amino acid residues and a mass of 514 kDa), which circulates the fatty acids, keeping them soluble in the aqueous environment. In addition, LDL has a highly hydrophobic core consisting of polyunsaturated fatty acid known as linoleate and about 1500 esterified cholesterol molecules. This core is surrounded by a shell of phospholipids and unesterified cholesterol, as well as the single copy of Apo B-100. LDL particles are approximately 22 nm (0.0000087 in.) in diameter and have a mass of about 3 million daltons, but since LDL particles contain a changing number of fatty acids, they actually have a distribution of mass and size.

Fifty percent of IDL5 are recognized by receptors in the liver cells because of the apoB-100 and ApoE they contain and are endocytosed. The other 50% of IDL lose ApoE. When their cholesterol content becomes greater than the content of triglyceride, they become LDL, with apoB-100 as the primary apolipoprotein. The LDL is taken into a cell via the LDL receptor via endocytosis, where the contents are stored, used for cell membrane structure, or converted into other products such as steroid hormones or bile acids.

Apolipoprotein B is the dominant protein constituent of LDL. The concentration of Apo B in normal plasma is 90 mg per 100 ml. Two forms of Apo B exist: Apo B-100 and Apo B-48. The first is found in VLDL and LDL and is produced by the liver. The second is found in chylomicrons and originates in the intestine. Human ApoB (protein accession #PA04114; 4509 aa, chromosome 2).

Source of Antigen and Antibodies



Human LDL is prepared from fresh, non-frozen plasma shown to be non reactive for HBsAg, anti-HCV, anti-HBc, and negative for anti-HIV 1 & 2 by FDA approved tests. It is supplied in an aqueous solution containing sucrose and saline. Density: 1.02 to 1.063 g/ml; Composition: 78-80% lipid, 22-20% protein; Mol wt 2300 Kda. It produced a single arc by IEP against antisera to whole human serum. Essentially free of other plasma lipoproteins and chylomicrons as determined by electrophoresis using a SPIFE Vis Cholesterol gel kit for lipids and Coomassie Blue for proteins. >=95% of total

lipoprotein content by electrophoresis.

Store at -20oC short term and -40oC long term.

Stability: 6 months

General References: Knott C (1986) Nucl. Acid Res. 14, 7501-7503; Law SW (1985) PNAS 82, 8340-8344; Hardman DA (1987) Biochem. 26, 5478-5486; Hospattankar AV (1987) BBRC 148, 279-285; Yang C-y (1986) Nature 323, 738-742; Knott TC (1986) Nature 323, 734-738;

*This product is for in vitro research use only.

Related items

- HDLD31-N-1 Human Plasma high density lipoprotein (HDL) native, purified
- LDLA12-N-1 Human Plasma low density lipoprotein (Ac-LDL) Acetylated, purified
- LDLA16-N-1 Human Plasma low density lipoprotein (DiI-Ac-LDL) Acetylated & DiI-labeled,
- LDLI314-N-1 Human Plasma low density lipoprotein (b-LDL) Biotinylated, purified
- LDLD15-N-1 Human Plasma low density lipoprotein (diI-LDL) DiI-labeled, purified
- LDLN11-A Anti-Human Plasma low density lipoprotein (LDL) native, antiserum
- LDLN11-N-1 Human Plasma low density lipoprotein (LDL) native, purified
- LDLN11-N-5 Human Plasma low density lipoprotein (LDL) native, purified
- LDL013-N-1 Human Plasma low density lipoprotein (o-LDL) Oxidized, purified
- LDL017-N-1 Human Plasma low density lipoprotein (DiI-O-LDL) Oxidized & DiI-labeled,
- LIPH16-N Lipoproteins, High Density, Human Plasma
- LIP117-N Lipoproteins, Intermediate Density, Human Plasma
- LIPL18-N Lipoproteins, Low Density, Human Plasma
- LIPV19-N Lipoproteins, Very Low Density, Human Plasma
- VLDLN21-N-1 Human Plasma very low density lipoprotein (VLDL) native,
- APOA11-S Anti-Human Plasma Apolipoprotein A-I protein antiserum
- APOAI2-A Anti-Human Apolipoprotein A-I protein IgG, aff pure
- APOA13-A Anti-Mouse Apolipoprotein A-I protein IgG, aff pure
- APOA15-N-100 Apolipoprotein A-I, Human Plasma, HDL
- APOA21-A Anti-Human Apolipoprotein A-II protein IgG, aff pure
- APOA25-N-100 Apolipoprotein A-II, Human Plasma, HDL
- APOA45-N-100 Apolipoprotein A-IV, Human Plasma, HDL
- APOB21-A Ant-Human Apolipoprotein B IgG, aff pure
- APOB25-N-100 Apolipoprotein B, Human Plasma, LDL
- APOC11-A Anti-Human Apolipoprotein C-I IgG, aff pure
- APOC15-N-100 Human Apolipoprotein C-I protein control for WB
- APOC15-N-100 Apolipoprotein C-I, Human Plasma, VLDL
- APOC21-S Anti-Human Plasma Apolipoprotein C-1I antiserum
- APOC22-A Anti-Human Apolipoprotein C-1I IgG, aff pure
- APOC25-N-50 Apolipoprotein C-II, Human Plasma, VLDL
- APOC32-A Anti-Human Apolipoprotein C-III IgG, aff pure
- APOC35-N-50 Apolipoprotein C-III, Human Plasma, VLDL
- APOE11-S Anti-Human ApoE protein antiserum #1
- APOE12-M Monoclonal Anti-Human ApoE protein IgG #2
- APOE13-A Anti-Human Plasma Apolipoprotein E (ApoE) IgG, aff pure
- APOE15-R Human Purified native plasma Apolipoprotein E protein
- APOE25-R Recombinant Purified Human Apolipoprotein E2 protein
- APOE31-S Anti-Human ApoE3
- APOE35-R Recombinant Purified Human Apolipoprotein E3 protein
- APOE36-R Recombinant (E coli) Purified

LDLN11-N-1-Human-LDL

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