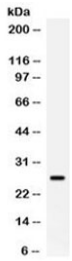
APOA1 Antibody / Apolipoprotein A1 Antibody (R32382)

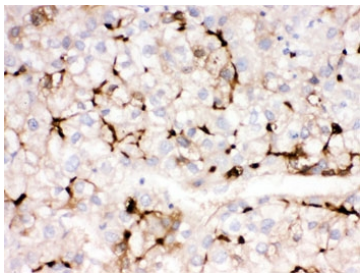
Catalog No.	Formulation	Size
R32382	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

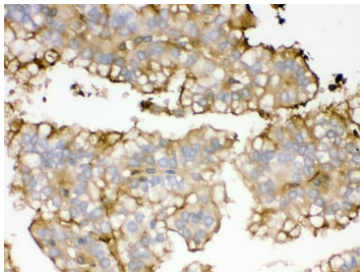
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P02647
Localization	Cytoplasmic, membranous
Applications	Western Blot : 0.1-0.5ug/ml IHC (FFPE) : 0.5-1ug/ml Flow Cytometry : 1-3ug/10^6 cells ELISA : 0.1-0.5ug/ml (human protein tested); request BSA-free format for coating
Limitations	This APOA1 Antibody / Apolipoprotein A1 Antibody is available for research use only.



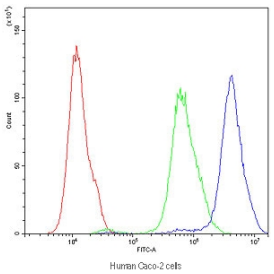
APOA1 Antibody / Apolipoprotein A1 Antibody in Human Placenta WB. Western blot testing of human placenta tissue lysate with APOA1 Antibody shows a strong predominant band at approximately 30 kDa, consistent with the predicted molecular weight of Apolipoprotein A1. The defined band supports detection of APOA1 in human tissue under the tested conditions.



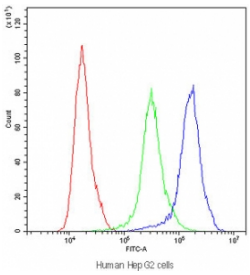
APOA1 Antibody / Apolipoprotein A1 Antibody in Human Liver Cancer IHC. Immunohistochemistry staining of FFPE human liver cancer tissue with APOA1 Antibody shows prominent cytoplasmic staining within hepatocyte-derived tumor cells. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6 10 mM citrate buffer for 20 min followed by cooling before testing.



APOA1 Antibody in Human Kidney Cancer IHC. Immunohistochemistry staining of FFPE human kidney cancer tissue with APOA1 Antibody shows localized cytoplasmic staining within subsets of tumor cells. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 6 10 mM citrate buffer for 20 min followed by cooling before testing.



APOA1 Antibody / Apolipoprotein A1 Antibody in Caco-2 Colorectal Adenocarcinoma Cells FACS. Flow cytometry testing of human Caco-2 colorectal adenocarcinoma cells with APOA1 Antibody at 1 ug/10^6 cells shows increased fluorescence in the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red), demonstrating APOA1 detection under the tested conditions.



APOA1 Antibody in HepG2 Hepatocellular Carcinoma Cells FACS. Flow cytometry testing of human HepG2 hepatocellular carcinoma cells with APOA1 Antibody at 1 ug/10^6 cells shows increased fluorescence in the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red), demonstrating APOA1 detection under the tested conditions.

Description

APOA1 Antibody / Apolipoprotein A1 Antibody recognizes apolipoprotein A-I, the major protein component of high-density lipoprotein (HDL) particles. Encoded by the APOA1 gene, ApoA-I is synthesized as a precursor protein and undergoes processing to generate the mature secreted apolipoprotein. Its amphipathic alpha-helical structure enables interactions with both lipids and aqueous environments, allowing APOA1 to organize and stabilize lipoprotein particles involved in lipid transport.

Apolipoprotein A1 plays a central role in reverse cholesterol transport, a pathway through which excess cholesterol can be removed from peripheral cells and transported toward the liver for further processing and elimination. Lipid-poor ApoA-I interacts with the ATP-binding cassette transporter ABCA1 to acquire cellular cholesterol and phospholipids, promoting formation of nascent HDL particles. Additional remodeling produces mature HDL capable of participating in continued cholesterol transport and exchange.

APOA1 also serves as an important activator of lecithin-cholesterol acyltransferase (LCAT), an enzyme that converts free cholesterol into cholesteryl esters within circulating lipoproteins. This reaction contributes to HDL maturation and facilitates movement of cholesterol into the hydrophobic core of the particle. Through these interactions, Apolipoprotein A1 helps coordinate HDL formation, remodeling, and lipid transport.

Beyond its role in cholesterol metabolism, ApoA-I has been investigated in vascular biology, inflammation, oxidative stress, and immune regulation. Changes in APOA1 abundance, structure, or function can influence HDL composition and biological activity. APOA1 has consequently been studied extensively in relation to atherosclerosis, cardiovascular disease, metabolic disorders, and mechanisms that regulate lipid homeostasis.

Genetic alterations affecting APOA1 can produce abnormalities in plasma lipoproteins and cholesterol transport. ApoA-I is also closely associated with other apolipoproteins and lipid-handling proteins that collectively regulate the formation, circulation, remodeling, and clearance of lipoprotein particles. These relationships make APOA1 an important target for research into HDL biology, lipid metabolism, and cardiovascular physiology.

NSJ Bioreagents offers this affinity-purified polyclonal reagent for investigating APOA1 biology. An APOA1 Antibody can support research into cholesterol transport, HDL metabolism, lipid homeostasis, cardiovascular biology, and the molecular functions of Apolipoprotein A1.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in receptor activity, cellular signaling, and metabolic regulation.

Application Notes

Optimal dilution of the APOA1 Antibody / Apolipoprotein A1 Antibody should be determined by the researcher.

Immunogen

Amino acids D25-Q267 of the human protein were used as the immunogen for the APOA1 antibody.

Storage

After reconstitution, the APOA1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

APOA1 antibody, Apolipoprotein A1 antibody, Apolipoprotein A-I antibody, ApoA-I antibody, ApoA1 antibody, HDL apolipoprotein antibody

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