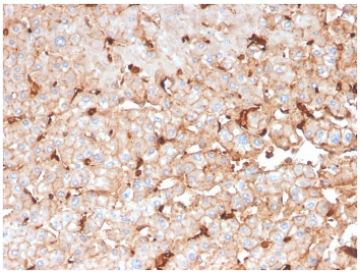
APOD Antibody / Lipocalin Family Protein Antibody [clone APOD/3414] (V8554)

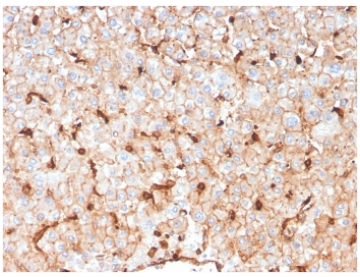
Catalog No.	Formulation	Size
V8554-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8554-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8554SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

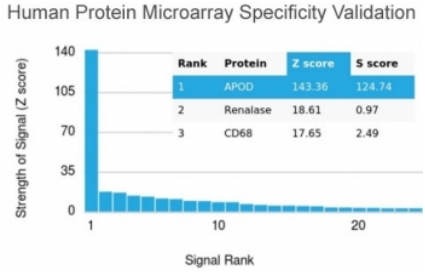
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	APOD/3414
Purity	Protein G affinity chromatography
UniProt	P05090
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This APOD Antibody / Lipocalin Family Protein Antibody is available for research use only.



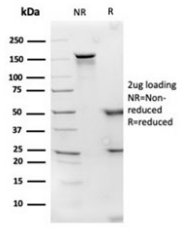
APOD Antibody in Human Liver IHC. Immunohistochemistry staining of FFPE human liver tissue with APOD Antibody / Lipocalin Family Protein Antibody. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min, followed by cooling before testing. APOD staining is observed throughout the liver tissue, including hepatocyte-associated staining. This APOD Antibody demonstrates detection of the lipocalin family protein APOD in human liver tissue.



APOD Antibody IHC Staining in Human Hepatocytes. Immunohistochemistry analysis of FFPE human liver with APOD Antibody / Lipocalin Family Protein Antibody. Tissue sections underwent heat-induced epitope retrieval (HIER) by boiling for 20 min in pH 9 buffer containing 10 mM Tris and 1 mM EDTA, then cooling prior to antibody staining. APOD immunoreactivity is visible across the hepatic parenchyma, with staining evident in hepatocytes. This APOD Antibody enables visualization of lipocalin family protein APOD expression in human hepatic tissue.



APOD Antibody Protein Microarray Specificity Validation. Protein microarray analysis of APOD Antibody / Lipocalin Family Protein Antibody using a HuProt microarray containing more than 19,000 full-length human proteins. APOD produced the highest-ranked signal with a Z-score of 143.36 and an S-score of 124.74. The Z-score represents signal strength in standard deviations above the mean signal generated on the array, while the S-score represents the difference between the intended target Z-score and the next-ranked signal. The strong separation between APOD and the next-ranked protein demonstrates high relative target specificity of clone APOD/3414 for APOD.



SDS-PAGE analysis of purified, BSA-free APOD antibody as confirmation of integrity and purity.

Description

APOD Antibody / Lipocalin Family Protein Antibody targets apolipoprotein D (APOD), a secreted glycoprotein and member of the lipocalin superfamily. Unlike many classical apolipoproteins, APOD is structurally related to lipocalins, a diverse group of proteins that bind and transport small hydrophobic molecules. APOD is expressed in multiple tissues and has been studied in lipid metabolism, nervous system biology, cellular stress responses and cancer. Clone APOD/3414 is a mouse monoclonal antibody generated against a portion of the human APOD protein spanning amino acids 21-119.

APOD can associate with lipoprotein particles and bind hydrophobic ligands, including arachidonic acid and other lipid molecules. Through these interactions, the protein has been implicated in lipid transport and metabolism as well as processes involving membrane-associated lipids. APOD differs from the major exchangeable apolipoproteins in both structure and biological distribution, and its membership in the lipocalin family provides an important framework for understanding its ligand-binding properties. An APOD Antibody can support research into the expression and distribution of this distinctive lipid-binding protein.

APOD has received particular attention in the nervous system, where its expression can change during aging, injury and neurodegenerative processes. Studies have associated APOD with responses to oxidative and cellular stress, and the protein has been investigated for potential protective functions involving lipid homeostasis and the handling of oxidized lipid species. These properties connect APOD biology with research into neuronal maintenance, glial responses, aging and mechanisms that protect cells from lipid-associated oxidative damage.

APOD expression has also been investigated in cancer and cell-cycle regulation. Altered levels have been reported in several malignancies, including tumors of the central nervous system, and APOD expression has been associated with cell-cycle arrest and tumor-related biological characteristics. These observations make APOD relevant to research spanning metabolism, neuroscience and cancer biology.

Clone APOD/3414 is validated for FFPE immunohistochemistry in human tissue and has also been evaluated on a HuProt protein microarray containing more than 19,000 full-length human proteins. In HuProt analysis, the Z-score represents signal strength in standard deviations above the mean array signal, while the S-score represents the difference between the intended target Z-score and the next-ranked signal, providing a measure of relative target specificity. NSJ Bioreagents provides APOD/3414 for research use. A Lipocalin Family Protein Antibody targeting APOD can support studies of lipid transport, hydrophobic ligand binding, cellular stress and APOD-associated biology.

APOD participates in lipid transport and lipid homeostasis through its interactions with hydrophobic molecules; explore related metabolic targets on our Metabolism Antibodies page.

Application Notes

Optimal dilution of the APOD Antibody / Lipocalin Family Protein Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 21-119 from the human protein was used as the immunogen for the APOD antibody.

Storage

Store the APOD antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

APOD antibody, Apolipoprotein D antibody, ApoD antibody, Apo-D antibody, Lipocalin family protein APOD antibody

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