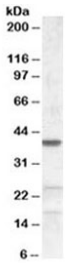
ABHD5 Polyclonal Antibody / NCIE2 Antibody (R34062)

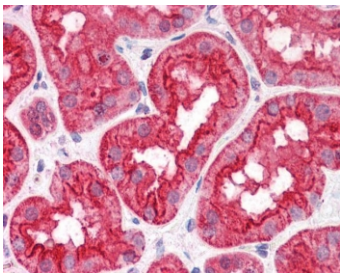
Catalog No.	Formulation	Size
R34062-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

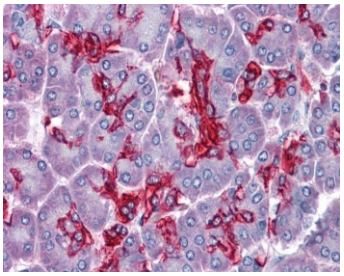
Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Rat, Dog, Cow
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	51099
Localization	Cytoplasmic
Applications	Western blot: 0.2-0.6ug/ml IHC (FFPE): 3.75ug/ml ELISA (peptide) LOD: 1:16000
Limitations	This ABHD5 Polyclonal Antibody / NCIE2 Antibody is available for research use only.



ABHD5 Polyclonal Antibody Western Blot in NIH3T3 Cells. Western blot testing of mouse NIH3T3 cell lysate was performed with ABHD5 Polyclonal Antibody at 0.2 ug/ml. A distinct predominant band is detected at approximately 39-40 kDa, consistent with the predicted molecular weight of ABHD5. The clean single-band detection supports recognition using an NCIE2 Antibody in mouse cell lysate.



ABHD5 Polyclonal Antibody IHC in Human Kidney. Immunohistochemistry of FFPE human kidney tissue was performed with ABHD5 Polyclonal Antibody at 3.75 ug/ml following heat-induced epitope retrieval by steaming in pH 6 citrate buffer. Prominent red staining is observed in renal tubular epithelial cells, with cytoplasmic and apical labeling and comparatively low signal in surrounding structures. The staining demonstrates tissue detection using an NCIE2 Antibody.



ABHD5 Polyclonal Antibody IHC in Human Pancreas. Immunohistochemistry of FFPE human pancreas tissue was performed with ABHD5 Polyclonal Antibody at 3.75 ug/ml following heat-induced epitope retrieval by steaming in pH 6 citrate buffer. Strong red staining is concentrated in epithelial and acinar-associated structures, with heterogeneous cytoplasmic labeling and substantially lower signal in surrounding tissue.

Description

ABHD5 Polyclonal Antibody recognizes alpha/beta hydrolase domain-containing protein 5, a lipid metabolism regulatory protein encoded by the ABHD5 gene. Also known as CGI-58, NCIE2, and IECN2, ABHD5 associates with intracellular lipid droplets and has an important role in regulating the balance between triglyceride storage and mobilization. Although ABHD5 belongs to the alpha/beta hydrolase protein family, it lacks the conventional catalytic serine found in many enzymatically active members of this group.

ABHD5 is an important coactivator of adipose triglyceride lipase (ATGL), encoded by PNPLA2. Interaction between ABHD5 and ATGL enhances the hydrolysis of triglycerides stored within lipid droplets, facilitating the release of fatty acids for downstream metabolic processes. Regulation of this interaction enables cells to coordinate lipid mobilization with changing metabolic and energetic requirements.

The activity of ABHD5 is closely connected to the organization and regulation of lipid droplets. Interactions with perilipin proteins influence the availability of CGI-58 for ATGL activation and contribute to controlled lipolysis. Through these mechanisms, ABHD5 participates in lipid droplet dynamics, fatty acid metabolism, triglyceride turnover, and cellular energy homeostasis.

Loss-of-function variants in ABHD5 cause Chanarin-Dorfman syndrome, also known as neutral lipid storage disease with ichthyosis. Impaired ABHD5 function disrupts normal triglyceride mobilization and results in abnormal accumulation of neutral lipids in multiple tissues. The relationship between ABHD5 dysfunction and lipid storage has made the protein relevant to research into metabolic disease, skin biology, hepatic lipid metabolism, and mechanisms controlling intracellular lipid homeostasis.

An ABHD5 Polyclonal Antibody can support research into lipid droplet biology, triglyceride metabolism, ATGL-dependent lipolysis, and cellular lipid homeostasis. NSJ Bioreagents provides antibodies for research investigating ABHD5 and molecular mechanisms controlling the storage and mobilization of intracellular lipids.

See our ABHD5 Antibody for additional research into CGI-58, lipid droplet biology, and triglyceride metabolism.

Application Notes

Optimal dilution of the ABHD5 Polyclonal Antibody / NCIE2 Antibody should be determined by the researcher.

1. This ABHD5 antibody does not cross react with ABHD4.

Immunogen

Amino acids FPERPDLADQDR were used as the immunogen for this ABHD5 Polyclonal Antibody.

Storage

Aliquot and store the ABHD5 Polyclonal Antibody at -20oC.

Alternate Names

ABHD5 antibody, CGI-58 antibody, NCIE2 antibody, IECN2 antibody, Abhydrolase Domain-Containing Protein 5 antibody, Neutral Lipid Storage Disease with Ichthyosis Protein antibody

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