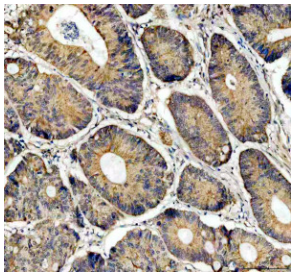
ABHD5 Antibody / CGI-58 Antibody (R32489)

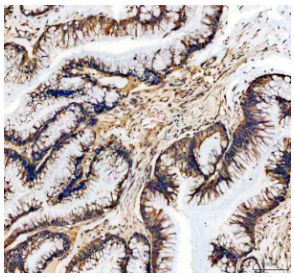
Catalog No.	Formulation	Size
R32489	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

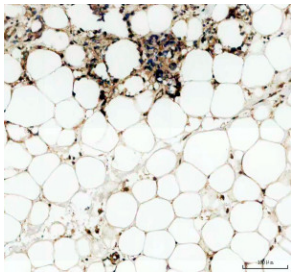
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q8WTS1
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence (FFPE): 5ug/ml
Limitations	This ABHD5 Antibody / CGI-58 Antibody is available for research use only.



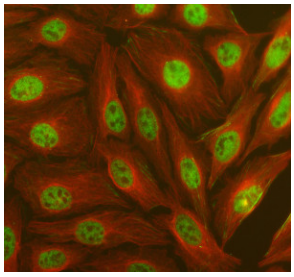
ABHD5 Antibody IHC in Human Colon Cancer Epithelium. Immunohistochemistry of FFPE human colon cancer tissue was performed with ABHD5 Antibody at 2 ug/ml following heat-induced epitope retrieval in pH 8 EDTA buffer. Brown staining is visible throughout the glandular tumor epithelium, with predominantly cytoplasmic labeling and heterogeneous staining intensity among the cells. The staining demonstrates detection with a CGI-58 Antibody in human colon cancer tissue.



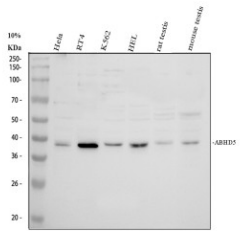
ABHD5 Antibody IHC in Human Mucinous Colon Cancer. Immunohistochemistry of FFPE human colon cancer tissue was performed with ABHD5 Antibody at 2 ug/ml following heat-induced epitope retrieval in pH 8 EDTA buffer. Distinct brown staining is present in epithelial cells lining the malignant glands, with comparatively weaker staining in many mucin-containing cells and surrounding stromal areas. The heterogeneous staining highlights differences in ABHD5 expression across the tumor tissue.



ABHD5 Antibody IHC in Human Breast Cancer. Immunohistochemistry of FFPE human breast cancer tissue was performed with ABHD5 Antibody at 2 ug/ml following heat-induced epitope retrieval in pH 8 EDTA buffer. Brown staining is visible in tumor cells distributed between adipose spaces, with heterogeneous cytoplasmic labeling and comparatively low staining in the surrounding adipose tissue. The pattern supports detection with a CGI-58 Antibody in human breast cancer tissue.



ABHD5 Antibody Immunofluorescence in HeLa Cells. Human HeLa cells were stained with ABHD5 Antibody at 5 ug/ml (green) and Alpha Tubulin Antibody (red) following enzyme-mediated antigen retrieval. ABHD5 fluorescence is concentrated predominantly in the nuclear region, with heterogeneous granular staining within the nuclei and comparatively weaker cytoplasmic signal. Alpha tubulin staining delineates the cytoplasmic microtubule network.



ABHD5 Antibody Western Blot in Human, Rat and Mouse Samples. Western blot testing of human HeLa (lane 1), RT4 (lane 2), K562 (lane 3), and HEL (lane 4) cell lysates, rat testis (lane 5), and mouse testis (lane 6) tissue lysates was performed with ABHD5 Antibody at 0.5 ug/ml. A predominant band is detected at approximately 39 kDa across all six samples, consistent with the expected molecular weight of ABHD5. The signal is strongest in RT4 cells, with clear detection also present in the other human, rat, and mouse samples. The results support cross-species detection using a CGI-58 Antibody.

Description

ABHD5 Antibody recognizes alpha/beta hydrolase domain-containing protein 5, a lipid metabolism regulatory protein encoded by the ABHD5 gene. Also known as CGI-58, ABHD5 associates with intracellular lipid droplets and has an important role in controlling the mobilization of stored triglycerides. The protein belongs to the alpha/beta hydrolase family but differs from conventional hydrolases in key residues associated with catalytic activity.

ABHD5 is an important coactivator of adipose triglyceride lipase (ATGL), encoded by PNPLA2. Under conditions that promote lipolysis, CGI-58 interacts with ATGL and enhances the hydrolysis of triglycerides stored within lipid droplets. This activity facilitates the release of fatty acids for downstream metabolic processes and places ABHD5 at a key regulatory point between lipid storage and lipid mobilization.

The localization and activity of ABHD5 are closely linked to lipid droplet biology. Interactions with perilipin proteins help regulate the availability of CGI-58 for ATGL activation, allowing cells to coordinate triglyceride breakdown with metabolic demand. ABHD5 has therefore become an important protein for investigating lipid droplet dynamics, lipolysis, fatty acid metabolism, and mechanisms governing cellular energy homeostasis.

Loss-of-function variants in ABHD5 cause Chanarin-Dorfman syndrome, also known as neutral lipid storage disease with

ichthyosis. The disorder is characterized by abnormal accumulation of triglyceride-containing lipid droplets in multiple tissues, illustrating the importance of CGI-58 in normal lipid mobilization. ABHD5 biology is also studied in adipocyte function, hepatic lipid metabolism, skin biology, inflammation, and metabolic disease.

An ABHD5 Antibody can support research into lipid droplet biology, triglyceride metabolism, ATGL-dependent lipolysis, and cellular lipid homeostasis. NSJ Bioreagents provides antibodies for research investigating CGI-58 and molecular mechanisms controlling the storage and mobilization of intracellular lipids.

Explore our Cell Biology Antibodies for additional research into lipid droplets, cellular metabolism, and intracellular regulation.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the ABHD5 Antibody / CGI-58 Antibody to be titrated for optimal performance.

Immunogen

Amino acids R169-D349 from the human protein were used as the immunogen for the ABHD5 antibody.

Storage

After reconstitution, the ABHD5 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

CGI-58 antibody, CGI58 antibody, ABHD5 antibody, Abhydrolase Domain-Containing Protein 5 antibody, Lipid Droplet-Binding Protein CGI-58 antibody

Copyright © NSJ Bioreagents. All rights reserved.