abcam

ab230324

Anti-FUCA1 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human FUCA1 aa 250-300 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P04066
Purification technique	Precipitation Ammonium Sulphate
Concentration	1.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Predicted

Species	Mouse, Cynomolgus monkey

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Predicted

Species	Mouse, Cynomolgus monkey
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Cynomolgus monkey
Dilution info	-
Notes	-

Target data

See full target information FUCA1

Function	Alpha-L-fucosidase is responsible for hydrolyzing the alpha-1,6-linked fucose joined to the reducing-end N-acetylglucosamine of the carbohydrate moieties of glycoproteins.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The protein known as 'alpha-L-fucosidase' or more commonly 'FUCA1' works as an enzyme breaking down complex carbohydrates by removing terminal alpha-L-fucose residues. This enzyme weighs approximately 51 kDa. It mainly expresses in tissues such as the liver pancreas and kidney playing a role in glycoprotein metabolism. Sometimes researchers refer to it simply as 'fucosidase' reflecting its central activity in fucose metabolism.
Biological function summary	FUCA1 impacts various cellular functions through its role in glycan processing. This enzyme is not typically part of a larger complex working independently to hydrolyze glycosidic bonds. Its action is important in the catabolism of fucosylated glycoproteins and glycolipids influencing cell signaling and recognition. Alterations in FUCA1 activity can disrupt these processes affecting cellular homeostasis.
Pathways	FUCA1 plays a role in the metabolism of glycosaminoglycans and glycoproteins. It contributes to the lysosomal degradation pathway alongside related enzymes such as beta-galactosidase. FUCA1's activity ensures the correct recycling of glycoproteins maintaining the balance of cellular components. The defect or overactivity of FUCA1 may have cascading effects throughout these pathways linking it with potential metabolic imbalances.
Associated diseases and disorders	FUCA1 connects closely with fucosidosis a lysosomal storage disorder caused by FUCA1 deficiency. This leads to an accumulation of fucose-containing compounds resulting in progressive neurological decline. Additionally some studies suggest a link between altered FUCA1 expression and certain cancers due to its role in cellular recognition and signaling. In cancer this enzyme's interaction with other glycoprotein-processing enzymes becomes highlighted highlighting the complex interplay within disease contexts.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

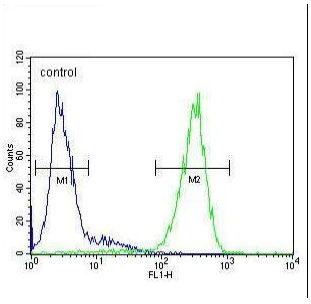
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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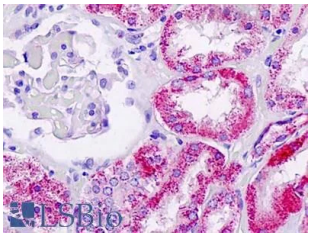
3 product images



Flow Cytometry (Intracellular) - Anti-FUCA1 antibody (ab230324)

FUCA1 Flow Cytometry (Intracellular) staining using rabbit Anti-FUCA1 antibody

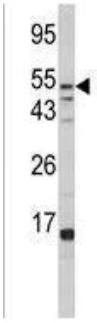
Intracellular flow cytometric analysis ofHepG2 (human liver hepatocellular carcinoma cell line) cells labeling FUCA1 with ab230324 at 1/10 dilution (green) compared with a negative control (blue).
FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FUCA1 antibody (ab230324)

FUCA1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FUCA1 antibody

Formalin-fixed, paraffin-embedded human kidney tissue stained for FUCA1 using ab230324 (5 µg/ml) in immunohistochemical analysis.



Western blot - Anti-FUCA1 antibody (ab230324)

All lanes:
Western blot - Anti-FUCA1 antibody (ab230324) at 1/1000 dilution

All lanes:
HepG2 (human liver hepatocellular carcinoma cell line) cell lysate at 35 µg

Predicted band size: 54 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.