

Rabbit GRIM19/NDUFA13 Polyclonal Antibody | anti-GRIM19/NDUFA13 antibody

Anti-GRIM19/NDUFA13 Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19857	Rabbit	Human, Mouse, Rat	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunohistochemistry, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

GRIM19/NDUFA13; Polyclonal Antibody; Anti-GRIM19/NDUFA13 Antibody Picoband; Long-chain-fatty-acid--CoA ligase 3; 6.2.1.3; Long-chain acyl-CoA synthetase 3; LACS 3; ACSL3; ACS3; FACL3; LACS3; anti-GRIM19/NDUFA13 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Expressed in breast, ductal and invasive ductal carcinomas of the breast, sporadic colorectal adenomas and carcinomas (at protein level).Expressed in fetal brain.Expressed in lung, amygdala, eye, prostate, pancreatic and prostate cancers, head and neck tumors and embryonal tumor.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Applicable Applications for anti-GRIM19/NDUFA13 antibody	ELISA, FCM/FACS (Flow Cytometry), IF (Immunofluorescence), IHC (Immunohistochemistry), ICC (Immunocytochemistry), WB (Western Blot)
Application Notes	WB: 0.25-0.5ug/ml, Mouse, Rat IHC(Paraffin-embedded Section): 2-5ug/ml, Human ICC/IF: 5ug/ml, Human IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10 ⁶ cells, Human ELISA: 0.1-0.5ug/ml
Immunogen	E coli-derived human GRIM19/NDUFA13 recombinant protein (Position: M1-T144).
Subcellular Localization	Mitochondrion outer membrane, Single-pass type III membrane protein, Peroxisome membrane, Single-pass type III membrane protein, Microsome membrane, Single-pass type III membrane protein, Endoplasmic reticulum membrane, Single-pass type III membrane protein
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Acyl-CoA synthetases (ACSL) activates long-chain fatty acids for both synthesis of cellular lipids, and degradation via beta-oxidation. ACSL3 mediates hepatic lipogenesis (By similarity). Preferentially uses myristate, laurate, arachidonate and eicosapentaenoate as substrates (By similarity). Has mainly an anabolic role in energy metabolism. Required for the incorporation of fatty acids into phosphatidylcholine, the major phospholipid located on the surface of VLDL (very low density lipoproteins).
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 7. Flow Cytometry analysis of U937 cells using anti-GRIM19/NDUFA13 antibody (AAA19857). Overlay histogram showing U937 cells stained with AAA19857 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-GRIM19/NDUFA13 Antibody (AAA19857, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 4. IHC analysis of GRIM19/NDUFA13 using anti-GRIM19/NDUFA13 antibody (AAA19857). GRIM19/NDUFA13 was detected in a paraffin-embedded section of human urothelial carcinoma with squamous differentiation tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRIM19/NDUFA13 Antibody (AAA19857) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRIM19/NDUFA13 Antibody (AAA19857) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GRIM19/NDUFA13 Antibody (AAA19857) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Lane 2: rat skeletal muscle tissue lysates, Lane 3: mouse heart tissue lysates, Lane 4: mouse skeletal muscle tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GRIM19/NDUFA13 antigen affinity purified polyclonal antibody (#AAA19857) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (17 kDa. The expected band size for GRIM19/NDUFA13 is at 16-18 kDa.



IF (Immunofluorescence)

Figure 6. IF analysis of GRIM19/NDUFA13 using anti-GRIM19/NDUFA13 antibody (AAA19857). GRIM19/NDUFA13 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-GRIM19/NDUFA13 Antibody (AAA19857) overnight at 4 degree C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

ADDITIONAL INFORMATION

Related Product Information for anti-GRIM19/NDUFA13 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product Categories/Family for anti-GRIM19/NDUFA13 antibody	Primary Antibodies; Cardiovascular; Fatty Acid Oxidation; Fatty Acids; Lipid and Lipoprotein Metabolism; Lipid Metabolism; Lipids/Lipoproteins; Metabolic Signaling Pathways; Metabolism; Pathways and Processes; Redox Metabolism; Signal Transduction

References	1. Angebault, C., Charif, M., Guegen, N., Piro-Megy, C., Mousson de Camaret, B., Procaccio, V., Guichet, P.-O., Hebrard, M., Manes, G., Leboucq, N., Rivier, F., Hamel, C. P., Lenaers, G., Roubertie, A. Mutation in NDUFA13/GRIM19 leads to early onset hypotonia, dyskinesia and sensorial deficiencies, and mitochondrial complex I instability. Hum. Molec. Genet. 24: 3948-3955, 2015. 2. Angell, J. E., Lindner, D. J., Shapiro, P. S., Hofmann, E. R., Kalvakolanu, D. V. Identification of GRIM-19, a novel cell death-regulatory gene induced by the interferon-beta and retinoic acid combination, using a genetic approach. J. Biol. Chem. 275: 33416-33426, 2000. 3. Barnich, N., Hisamatsu, T., Aguirre, J. E., Xavier, R., Reinecker, H.-C., Podolsky, D. K. GRIM-19 interacts with nucleotide oligomerization domain 2 and serves as downstream effector of anti-bacterial function in intestinal epithelial cells. J. Biol. Chem. 280: 19021-19026, 2005.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	20139242
NCBI GeneID	51079
UniProt Accession #	Q9P0J0; Q6PKI0; Q9H2L3; Q9Y327; B4DF76; K7EK58
Molecular Weight	144
NCBI Official Full Name	NADH dehydrogenase
NCBI Official Synonym Full Names	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 13
NCBI Official Symbol	NDUFA13
NCBI Official Synonym Symbols	B16.6; CDA016; CGI-39; GRIM19; GRIM-19
NCBI Protein Information	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13; NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13; CI-B16.6; complex I-B16.6; complex I B16.6 subunit; cell death-regulatory protein GRIM19; cell death regulatory protein GRIM-19;
UniProt Protein Name	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13
UniProt Gene Name	NDUFA13
UniProt Synonym Gene Names	GRIM19; CI-B16.6; GRIM-19; Gene associated with retinoic and IFN-induced mortality 19 protein
UniProt Entry Name	NDUAD_HUMAN

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