Product Datasheet

CD36 Antibody (D-2712) - BSA Free
NB110-59724

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB110-59724

CD36 Antibody (D-2712) - BSA Free

Product Information

Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	D-2712
Preservative	0.05% Sodium Azide
Isotype	IgA Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	110 kDa

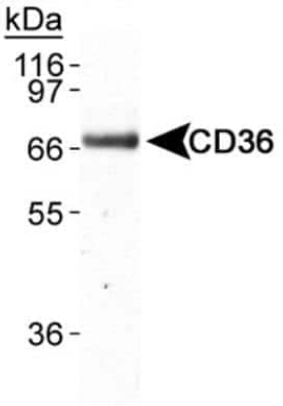
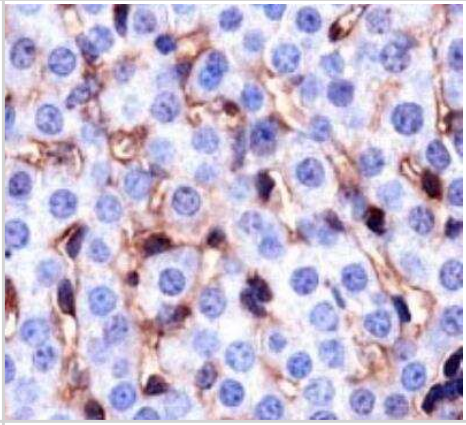
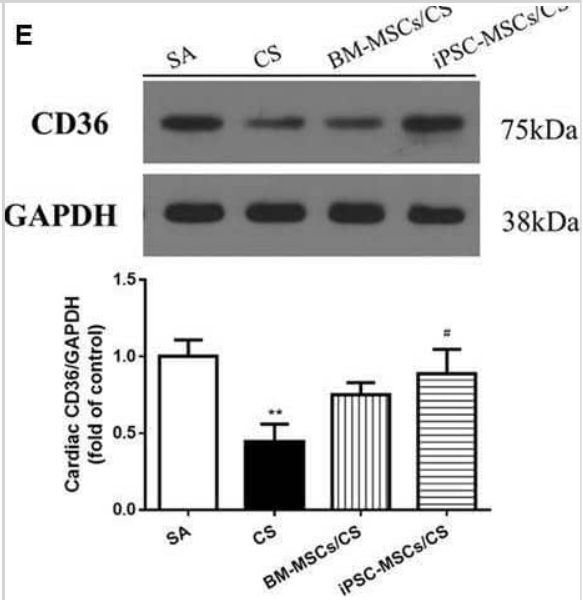
Product Description

Description	Novus Biologicals Mouse CD36 Antibody (D-2712) - BSA Free (NB110-59724) is a monoclonal antibody validated for use in IHC, WB and IP. Anti-CD36 Antibody: Cited in 9 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	948
Gene Symbol	CD36
Species	Mouse, Rat, Human (Negative)
Reactivity Notes	Does not react with human.
Marker	Endothelial Cell Marker
Immunogen	This CD36 Antibody (D-2712) was developed against adenovirus expressing recombinant mouse CD36 [Uniprot: Q08857]

Product Application Details

Applications	Western Blot, Immunohistochemistry-Paraffin, Immunohistochemistry, Immunoprecipitation
Recommended Dilutions	Western Blot 1:500, Immunohistochemistry 1:100-1:250, Immunoprecipitation 10 -20 ug, Immunohistochemistry-Paraffin 1:100-1:250
Application Notes	In Western blot, a band is observed at ~70-80 kDa. The theoretical molecular weight of CD36 is ~53 kDa. The difference in theoretical MW and actual MW, as seen in Western blot, is most likely due to the heavy glycosylation and palmitoylation of this protein.

Images

Western Blot: CD36 Antibody (D-2712) [NB110-59724] - Detection of CD36 in mouse adipose lysate.	
Immunohistochemistry: CD36 Antibody (D-2712) [NB110-59724] - Staining of CD36 in mouse liver.	
Effect of MSCs on cardiac expressions of proteins regulating cholesterol, triglycerides and FFA metabolism. (A) CS exposure caused significant elevation of cardiac expression of LDL-R, which was attenuated in both the BM-MSCs/CS and iPSC-MSCs/CS groups. (B) CS led to increased cardiac expression of HMGCR, which was attenuated in the iPSC-MSCs/CS group. (C) CS reduced cardiac expression of ABCA1, which was restored in the iPSC-MSCs/CS group. (D) CS exposure significantly reduced protein expression of LPL, which was restored in the iPSC-MSCs/CS group. (E) CS exposure led to a significant reduction in protein expression of cardiac CD36, which was significantly restored in the iPSC-MSCs/CS group. (F) Cardiac FAS protein expression was inhibited after CS exposure, which showed a trend of restoration but not reaching significant level in both the BM-MSCs/CS and iPSC-MSCs/CS groups. Cardiac levels of protein expression were normalized to GAPDH levels and expressed as fold change vs. relative control. Data are expressed as mean +/- SEM; n = 7–8. Data were analyzed by one-way ANOVA. □p < 0.05, □□p < 0.01, □□□p < 0.001 for comparison between the CS and SA groups. #p < 0.05, ##p < 0.01 for comparison between the BM-MSCs/CS or iPSC-MSCs/CS groups and CS group, respectively. LDL-R, low density lipoprotein receptor; GAPDH, glyceraldehyde 3-phosphate dehydrogenase; HMGCR, 3-hydroxy-3-methylglutaryl coenzyme A reductase; ABCA1, ATP-binding cassette protein-A1; LPL, Lipoprotein lipase; CD36, fatty acid translocase (FAT)/CD36; FAS, fatty acid synthase. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/28804458), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Liang Y, Li X, Zhang Y et al. Induced Pluripotent Stem Cells-Derived Mesenchymal Stem Cells Attenuate Cigarette Smoke-Induced Cardiac Remodeling and Dysfunction Front Pharmacol 2017-08-14 [PMID: 28804458] (Western Blot, Human)

Y Ji, Y Liang, PH Chu, M Ge, SC Yeung, MS Man Ip, JC Wo Mak The effects of intermittent hypoxia on hepatic expression of fatty acid translocase CD36 in lean and diet-induced obese mice Biomedical journal, 2022-10-13;0(0):. 2022-10-13 [PMID: 36244649] (Western Blot, Immunohistochemistry-Paraffin, Mouse)

Georgiou, D K, Dagnino-Acosta, A Et al. Ca2+ Binding/Permeation via Calcium Channel, CaV1.1, Regulates the Intracellular Distribution of the Fatty Acid Transport Protein, CD36, and Fatty Acid Metabolism. J Biol Chem 2015-09-25 [PMID: 26245899] (Westen Blot, Immunohistochemistry, Proximity Ligation Assay, Mouse)

Yuan C, Guo X, Zhou Q et al. OAB-14, a bexarotene derivative, improves Alzheimer's disease-related pathologies and cognitive impairments by increasing beta-amyloid clearance in APP/PS1 mice. Biochim Biophys Acta Mol Basis Dis 2019-01-01 [PMID: 30389579] (Immunohistochemistry-Paraffin, Mouse)

Kuhnel E, Kleff V, Stojanovska V et al. PlacentalSpecific Overexpression of sFlt1 Alters Trophoblast Differentiation and Nutrient Transporter Expression in an IUGR Mouse Model. Journal of Cellular Biochemistry. 2016-11-09 [PMID: 27859593] (WB, Mouse)

Nusken E, Gellhaus A, Kuhnel E et al. Increased Rat Placental Fatty Acid, But Decreased Amino Acid and Glucose Transporters Potentially Modify Intrauterine Programming. J. Cell. Biochem. 2015-11-21 [PMID: 26590355] (WB, Rat)

Chen YJ, Lo YH, Chen YT et al. Magnesium lithospermate B improves metabolic changes in high-fat diet-fed rats with metabolic syndrome Journal of Functional Foods. 2015-04-01 (WB, Rat)

Details:
CD36/SR-B3 antibody was used for WB application on lysates of liver tissue from rats that were fed different diet regimns as - normal diet control/NC, high-fat diet control/HC or HC+ MLB/Magnesium lithospermate B (MLB5-20/HC +5-20?mg/kg/day of MLB). Primary antibody was used at 1:1000 dilution in 5% skim milk and detected with HRP-conjugated secondary antibody - chemiluminescent HRP substrate (data shown in Fig. 4A).

Gong T, Wang Q, Lin Z et al. Endoplasmic reticulum (ER) stress inhibitor salubrinal protects against ceramide-induced SH-SY5Y cell death. Biochem Biophys Res Commun. 2012-01-01 [PMID: 22935424]

Feldhahn N, Arutyunyan A, Stoddart S et al. Environment-mediated drug resistance in Bcr/Abl-positive acute lymphoblastic leukemia Oncoimmunology 2012-08-01 [PMID: 22934254] (WB, Mouse)

During A, Doraiswamy S, Harrison EH. Xanthophylls are preferentially taken up compared with {beta}-carotene by retinal cells via a SRBI-dependent mechanism. J Lipid Res;49(8):1715-1724. 2008-01-01 [PMID: 18424859] (WB, Human)

Procedures

Western Blot protocol for CD36 Antibody (NB110-59724)
CD36 Antibody (D-2712):
1. Perform SDS-PAGE (4-12% MOPS) on samples to be analyzed, loading 30 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH2O and then stain the blot using Ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS, 1 hour at room temperature.
6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the rabbit anti-CD36 primary antibody (NB 110-59724) in blocking buffer and incubate 2 hours at room temperature.
8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted mouse-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Pierce, ECL).
**Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

Immunohistochemistry-Paraffin protocol for CD36/SR-B3 Antibody (NB110-59724)
CD36 Antibody (D-2712):
Antigen Unmasking:

Bring slides to a boil in 10mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench top for 30 minutes.

Staining:

1. Wash sections in dH2O three times for 5 minutes each.
2. Wash section in wash buffer (1X PBS/0.1% Tween-20 (1X PBST)) for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1X PBST, 5% goat serum) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul primary antibody diluted in 1X PBST, 5% goat serum to each section. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated secondary antibody, diluted in 1X PBST, 5% goat serum. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in dH2O.
12. Counterstain sections in hematoxylin.
13. Wash sections in dH2O two times for 5 minutes each.
14. Dehydrate sections.
15. Mount the coverslips.

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Products Related to NB110-59724

NBL1-08939	CD36 Overexpression Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]

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