Product Datasheet

FAT4 Antibody - BSA Free
NBP1-78381

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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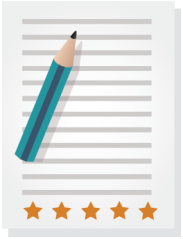
Updated 10/23/2024 v.20.1



NBP1-78381

FAT4 Antibody - BSA Free

Product Information

Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description

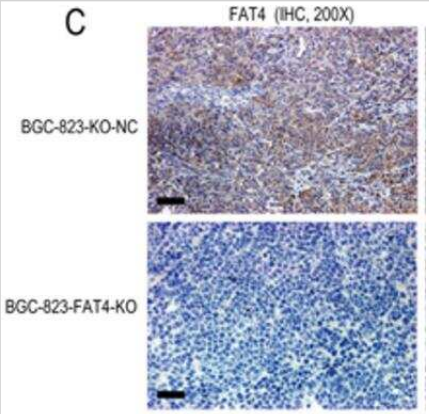
Host	Rabbit
Gene ID	79633
Gene Symbol	FAT4
Species	Human, Mouse
Immunogen	A synthetic peptide made to a C-terminal portion of the human FAT4 protein (between residues 4000-4500) [UniProt Q6V0I7]

Product Application Details

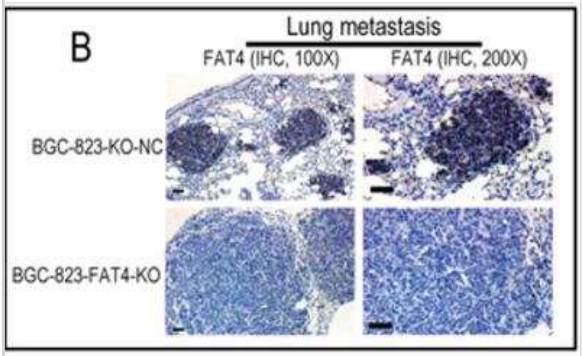
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockout Validated
Recommended Dilutions	Western Blot reported in scientific literature (PMID 29321622), Immunohistochemistry 1:150, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:150, Knockout Validated
Application Notes	Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

Images

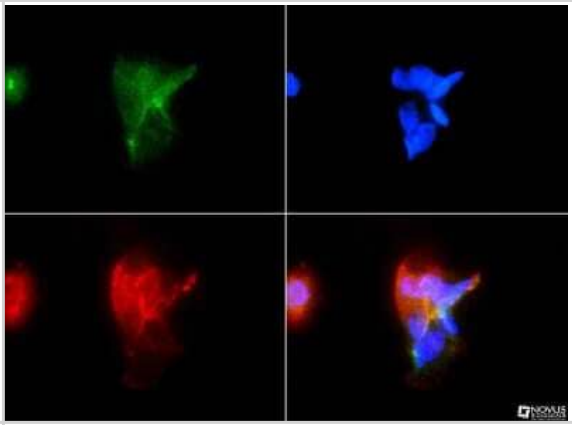
Knockout Validated: FAT4 Antibody - BSA Free [NBP1-78381] - FAT4 Antibody [NBP1-78381] - Effect of FAT4 knockout on GC tumorigenesis in the nude mice xenograft model. Representative images show IHC staining of BGC-823-KO-NC and BGC-823-FAT4-KO derived xenograft tumors with antibody against FAT4 (NBP1-78381F). Scale bar, 100 um. Image collected and cropped by Citeab from the following publication (//pubmed.ncbi.nlm.nih.gov/29435168/) licensed under a CC-BY license.



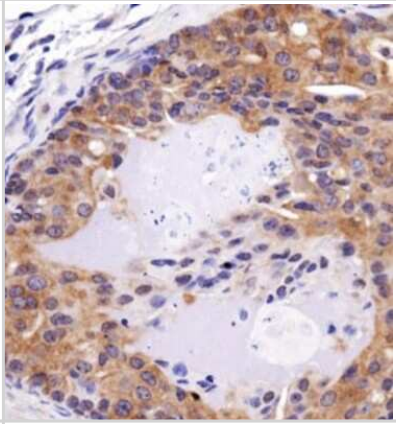
Knockout Validated: FAT4 Antibody [NBP1-78381] - IHC staining of metastatic lung nodules in the nude mice model. Representative images show IHC staining with anti-FAT4 antibody of lung sections from BGC-823-FAT4-KO and BGC-823-KO-NC group mice. FAT4 is positive staining in the lung metastatic tumor nodules of BGC-823-KO-NC group, whereas it negative expresses in BGC-823-FAT4-KO group. Scale bar, 100 i1/4m. Image collected and cropped by Citeab from the following publication (Low FAT4 expression is associated with a poor prognosis in gastric cancer patients. Oncotarget (2018) licensed under a CC-BY license.



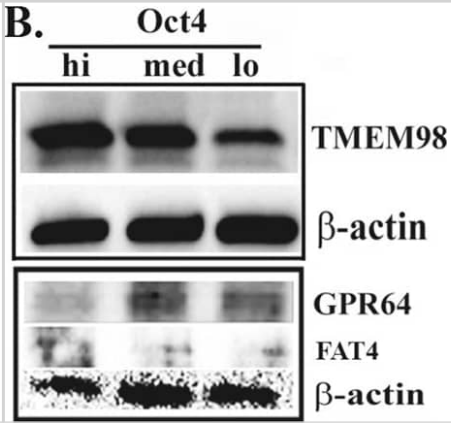
Immunocytochemistry/Immunofluorescence: FAT4 Antibody [NBP1-78381] - Antibody was tested in A431 cells with FITC (green). Nuclei were counterstained with DAPI (blue).



Immunohistochemistry: FAT4 Antibody [NBP1-78381] - IHC analysis of FAT4 in mouse prostate cancer using DAB with hematoxylin counterstain.



Western Blot: FAT4 Antibody - BSA Free [NBP1-78381] - Expression of selected genes in BCC subsets. (A) Real time PCR for GPR64, FAT4, TMEM98, ALOX5 AP, DUSP4, RAP1A & FN1. The RNA was isolated from Oct4hi, Octmed & Oct4low subsets from MDA-MB-231 stably transfected with pEGFP1-Oct3/4. The results are shown as relative to β-actin expression with mean ± SD for four independent experiments. (B) Western blots for GPR64, TMEM98, FAT4, RAP1A & FN1 using whole cell extracts expression from Oct4hi, Octmed & Oct4low, isolated as for 'A'. The results represent four different independent experiments. Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/s41598-017-18834-5), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Jie-Yi Shi, Qingfeng Xing, Meng Duan, Zhi-Chao Wang, Liu-Xiao Yang, Ying-Jun Zhao, Xiao-Ying Wang, Yun Liu, Minghua Deng, Zhen-Bin Ding, Ai-Wu Ke, Jian Zhou, Jia Fan, Ya Cao, Jiping Wang, Ruibin Xi, Qiang Gao Inferring the progression of multifocal liver cancer from spatial and temporal genomic heterogeneity Oncotarget 2016-01-19 [PMID: 26672766]

Wang X Loss of FAT4 induces aneuploidy in urothelial cells and promotes the invasive and migratory capacities of bladder cancer cell lines Thesis 2023-01-01

Hoelting TLB, Cidre-Aranaz F, Matzek D, Popper B Neomorphic DNA-binding enables tumor-specific therapeutic gene expression in fusion-addicted childhood sarcoma bioRxiv 2022-01-01 [PMID: 36229873] (FLOW, Mouse)

Jiang X, Liu Z, Xia Y et al. Low FAT4 expression is associated with a poor prognosis in gastric cancer patients. Oncotarget 2018-01-12 [PMID: 29435168] (IHC-P, Mouse)

Bliss SA, Paul S, Pobiarzyn PW et al. Evaluation of a developmental hierarchy for breast cancer cells to assess risk-based patient selection for targeted treatment Sci Rep 2018-01-10 [PMID: 29321622] (WB, Human)

Pujol F, Hodgson T, Martinez-Corral I et al. Dachsous1-Fat4 Signaling Controls Endothelial Cell Polarization During Lymphatic Valve Morphogenesis Arterioscler. Thromb. Vasc. Biol. 2017-07-13 [PMID: 28705793]

Jung HY, Cho H, Oh MH et al. Loss of FAT Atypical Cadherin 4 Expression Is Associated with High Pathologic T Stage in Radically Resected Gastric Cancer J Gastric Cancer 2015-03-01 [PMID: 25861521] (IHC-P, Human)

Furukawa T, Sakamoto H, Takeuchi S et al. Whole exome sequencing reveals recurrent mutations in BRCA2 and FAT genes in acinar cell carcinomas of the pancreas Sci Rep 2015-03-06 [PMID: 25743105] (IHC-P, Human)

Details:
FAT4 antibody used for IHC-P analysis of paraffin processed tissue sections of human acinar cell carcinoma. The IHC-P assay was performed using streptavidin and biotin based detection kit namely - Histofine SAB-PO kit.

Procedures

Immunohistochemistry-Paraffin Embedded Sections protocol specific for FAT4 antibody (NBP1-78381) IHC-P
FAT4 Antibody:
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM 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 deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. 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 diluted secondary antibody. 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 deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

Immunocytochemistry/Immunofluorescence protocol for FAT4 Antibody (NBP1-78381)
FAT4 Antibody:
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

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HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
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NBP2-24891	Rabbit IgG Isotype Control
NBP1-78381F	FAT4 Antibody [FITC]

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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