

Product Datasheet

BCAT1 Antibody (OTI3F5)

NBP2-01826

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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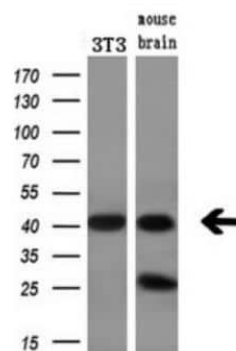


NBP2-01826**BCAT1 Antibody (OTI3F5)**

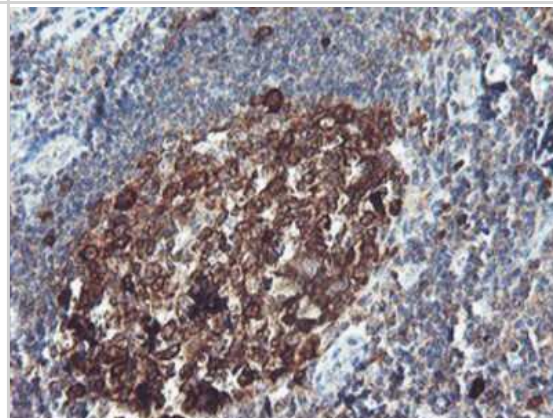
Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	OTI3F5
Preservative	0.02% Sodium Azide
Isotype	IgG2a
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.3), 1.0% BSA and 50% Glycerol
Target Molecular Weight	42.8 kDa
Product Description	
Description	Novus Biologicals Mouse BCAT1 Antibody (OTI3F5) (NBP2-01826) is a monoclonal antibody validated for use in IHC and WB. Anti-BCAT1 Antibody: Cited in 2 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	586
Gene Symbol	BCAT1
Species	Human, Mouse, Canine
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
Immunogen	Full length human recombinant protein of human BCAT1(NP_005495) produced in HEK293T cell.
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunohistochemistry
Recommended Dilutions	Western Blot 1:500-2000, Immunohistochemistry 1:150, Immunohistochemistry-Paraffin 1:150

Images

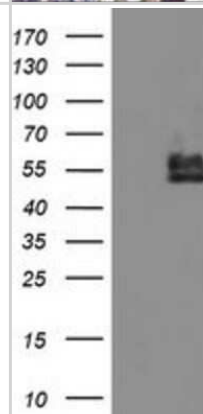
Western Blot: BCAT1 Antibody (3F5) [NBP2-01826] - Analysis of extracts (10ug) from a mouse cell line and a mouse tissue by using anti-BCAT1 monoclonal antibody. (1:200)



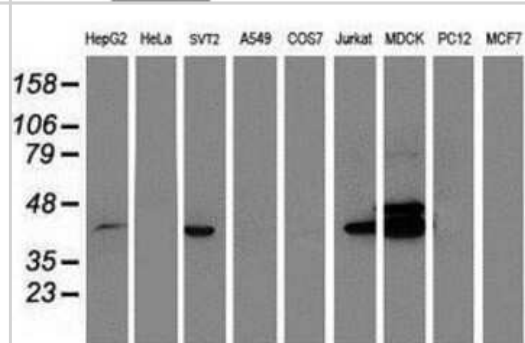
Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Human tonsil using anti-BCAT1 mouse monoclonal antibody.



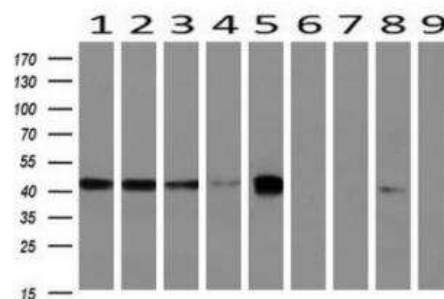
Western Blot: BCAT1 Antibody (3F5) [NBP2-01826] - HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY BCAT1 (Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-BCAT1.



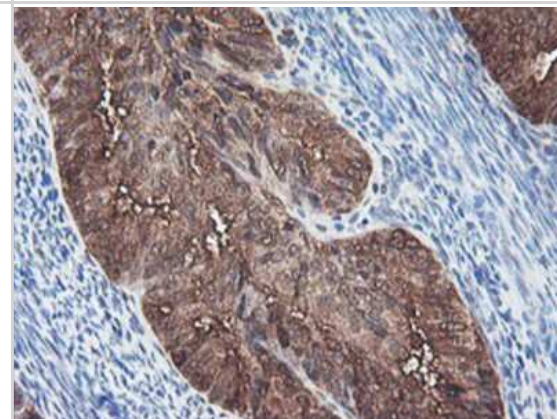
Western Blot: BCAT1 Antibody (3F5) [NBP2-01826] Analysis of extracts (35ug) from 9 different cell lines by using anti-BCAT1 monoclonal antibody.



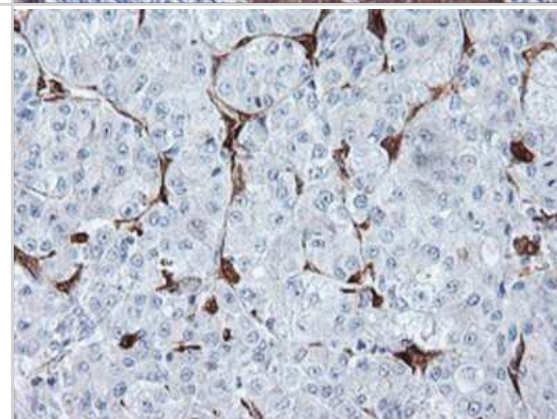
Western Blot: BCAT1 Antibody (3F5) [NBP2-01826] - Analysis of extracts (10ug) from 9 Human tissue by using anti-BCAT1 monoclonal antibody at 1:200 (1: Testis; 2: Omentum; 3: Uterus; 4: Breast; 5: Brain; 6: Liver; 7: Ovary; 8: Thyroid gland; 9: Colon)



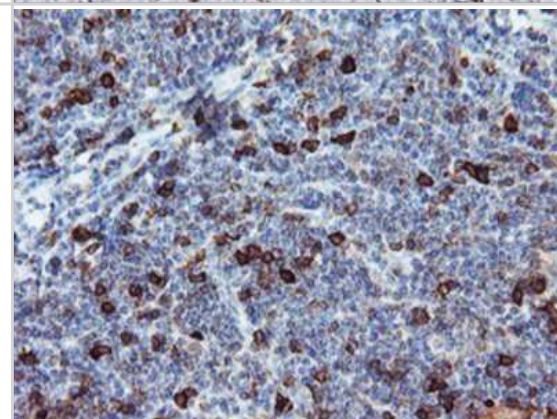
Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Adenocarcinoma of Human endometrium tissue using anti-BCAT1 mouse monoclonal antibody.



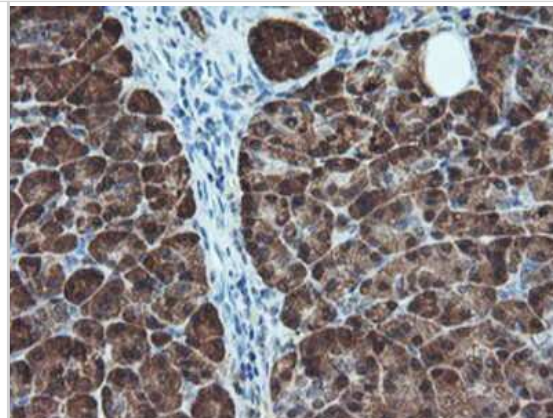
Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Carcinoma of Human liver tissue using anti-BCAT1 mouse monoclonal antibody.



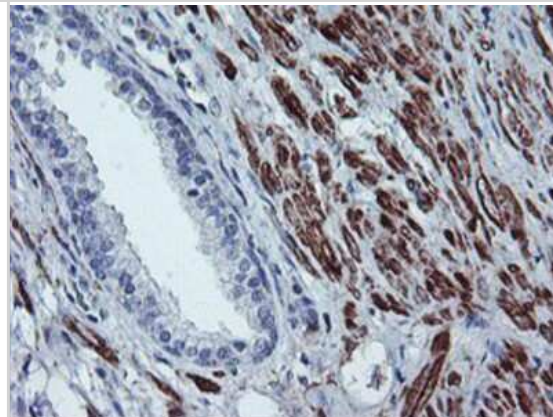
Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Human lymphoma tissue using anti-BCAT1 mouse monoclonal antibody.



Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Human pancreas tissue using anti-BCAT1 mouse monoclonal antibody.



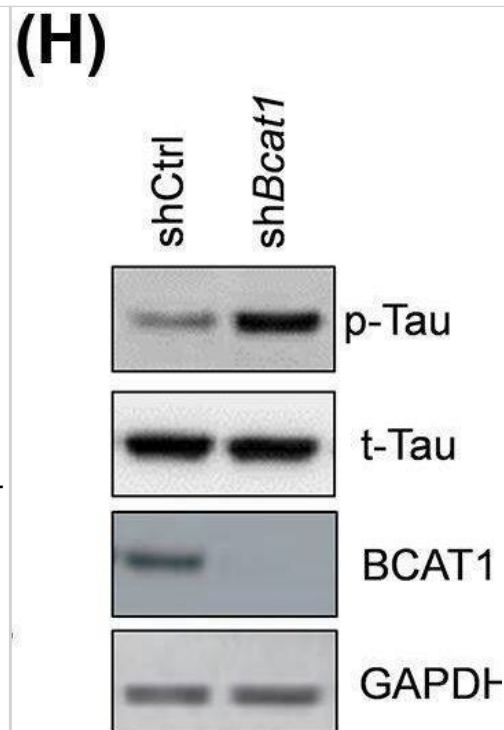
Immunohistochemistry-Paraffin: BCAT1 Antibody (3F5) [NBP2-01826] - Staining of paraffin-embedded Human prostate tissue using anti-BCAT1 mouse monoclonal antibody.



BCAT1 Antibody (OTI3F5)[NBP2-01826]Simple Western analysis of endogenous protein IFIT3 from THP-1 lysates (0.1 mg/mL) using IFIT3 Mouse Monoclonal Antibody . The virtual lane view (left) shows the target (as indicated) at 1:50 dilution of primary antibody. The corresponding electropherogram view (right) plots chemiluminescence by molecular weight along the capillary at a 1:50 dilution of primary antibody. This experiment was performed under reducing conditions on the Jess Simple Western instrument from ProteinSimple, a Bio-Techne brand, using the 12-230 kDa Separation Module.



BCAAs promote the phosphorylation of Tau(A-C) Bcat1 mRNA level is decreased in the brain tissues of diabetic, aged, or 3xTg AD mice (n=5). **P<0.01 by unpaired Student's t-test. (D) Representative Western blot and quantitative results showing BCAT1 protein level are decreased in the brain tissues of AD mice (n=4). ***P<0.001 by unpaired Student's t-test. (E) BCAA diet does not affect the content of amyloid β 42 (A β 42) in the brain tissues of AD mice (n=5). (F) Representative Western blot and quantitative results showing BCAA diet increase the level of phosphorylated Tau protein in the brain tissues of AD mice (n=4). ***p<0.001 by unpaired Student's t-test. (G) Relative Western blot and quantitative results showing leucine increase the level of phosphorylated Tau protein in the neurons isolated from mice. The neurons were isolated from the 3xTg mice and treated with leucine (1 mM), isoleucine (1 mM), or valine (1 mM) for 24 h. The experiments were repeated for three times. ***P<0.001 by one-way ANOVA followed by Bonferroni post-hoc test. (H) Bcat1 knockdown increased the level of phosphorylated Tau protein in the neurons isolated from mice. The neurons were isolated from the 3xTg mice and infected with lentivirus carrying indicated shRNAs for 48 h. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/29802157>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Zhu Z, Achreja A, Meurs N et al. Tumour-reprogrammed stromal BCAT1 fuels branched-chain ketoacid dependency in stromal-rich PDAC tumours *Nat Metab* 2020-07-06 [PMID: 32694827] (WB, Human)

Li H, Ye D, Xie W et al. Defect of Branched-chain Amino Acid Metabolism Promotes the Development of Alzheimer's Disease by Targeting the mTOR Signaling *Biosci. Rep.* 2018-05-25 [PMID: 29802157] (Mouse)



Novus Biologicals USA

10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

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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]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)

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