Product Datasheet

Glut2 Antibody - BSA Free

NBP2-22218

Unit Size: 0.1 ml

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

Reviews: 2 Publications: 15

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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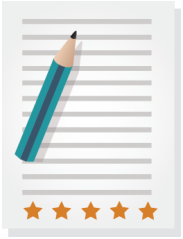
Updated 12/20/2023 v.20.1



NBP2-22218

Glut2 Antibody - BSA Free

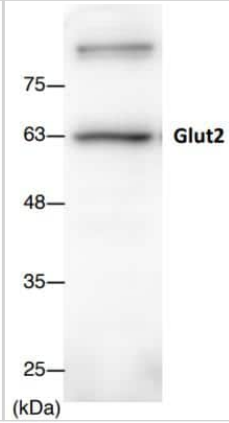
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description	
Host	Rabbit
Gene ID	6514
Gene Symbol	SLC2A2
Species	Human, Mouse
Immunogen	A synthetic peptide made to an internal portion of the human GLUT2 protein (between residues 50-150) [UniProt# P11168]

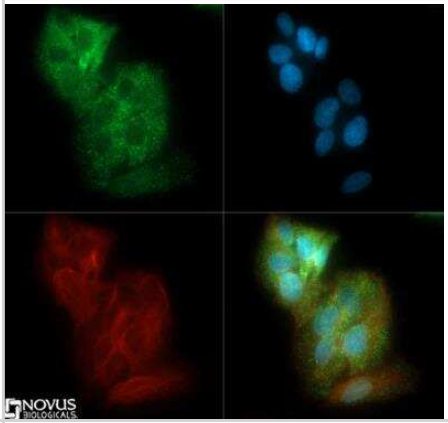
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1.0 - 2.0 ug/ml, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1:500, Immunohistochemistry-Paraffin 1:200
Application Notes	This Glucose Transporter GLUT2 antibody is useful for Western blot, Immunocytochemistry/Immunofluorescence, and Immunohistochemistry on paraffin embedded sections. In Western blot a band was observed ~ 55 kDa. In ICC/IF membrane staining was observed in HepG2 cells. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

Images

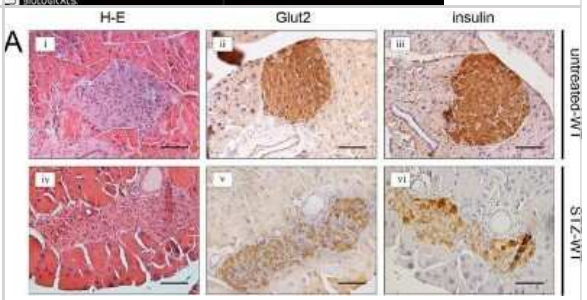
Western Blot: Glut2 Antibody [NBP2-22218] - Analysis of Glut2 in total lysates of MIN6 cells using anti-Glut2 (NBP2-22218) antibody at 1/500 dilution. Image was submitted via customer review.



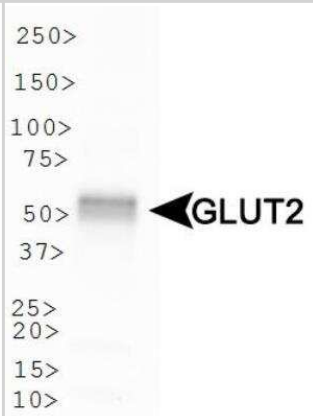
Immunocytochemistry/Immunofluorescence: Glut2 Antibody [NBP2-22218] - Glut2 antibody was tested in HepG2 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



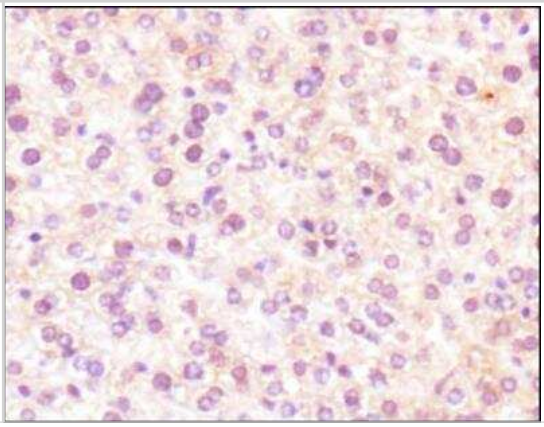
Immunohistochemistry-Paraffin: Glut2 Antibody [NBP2-22218] - Histology and immunostaining of pancreas in treated and untreated mice with STZ. (i, iv) H-E of a pancreatic islet in untreated and STZ-WT mice; (ii, v) and (iii,vi) reduction of Glut2 and insulin expression in STZ-WT mice compared to control mice. B. (Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0105550), licensed under a CC-BY license.



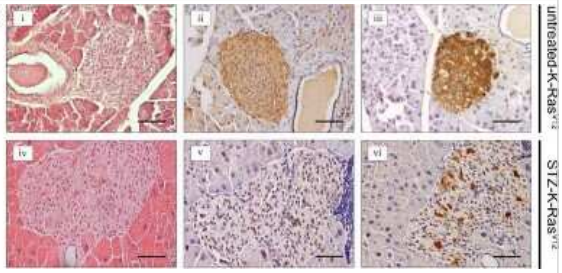
Western Blot: Glut2 Antibody [NBP2-22218] - Analysis of Glucose Transporter GLUT2 in human pancreas.



Immunohistochemistry: Glut2 Antibody [NBP2-22218] - Staining of Glucose Transporter GLUT2 in mouse liver.



Immunohistochemistry-Paraffin: Glut2 Antibody [NBP2-22218] - Histology and immunostaining of pancreas in treated and untreated mice with STZ. (i, iv) H-E of a pancreatic islet in untreated and STZ-K-RasV12 mice; (ii, v) and (iii,vi) reduction of Glut2 and insulin expression in STZ-K-RasV12 mice compared to untreated K-RasV12 control mice. Magnification 200x. Calibration bar: 50 um. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0105550), licensed under a CC-BY license.



Publications

Visavadiya NP, Rossiter HB, Khamoui AV. Distinct glycolytic pathway regulation in liver, tumour and skeletal muscle of mice with cancer cachexia Cell Biochemistry and Function 2021-08-01 [PMID: 34129243]

Shiraki A, Oyama JI, Shimizu T, Node K Linagliptin exacerbates heart failure due to energy deficiency via downregulation of glucose utilization and absorption in a mouse model European journal of pharmacology 2023-03-23 [PMID: 36965743]

Yang K, Sun J, Zhang Z et al. Reduction of mRNA m6A associates with glucose metabolism via YTHDC1 in human and mice Diabetes research and clinical practice 2023-03-04 [PMID: 36878322] (WB, Mouse)

Juras J, Webb M, Young L et al. In situ microwave fixation provides an instantaneous snapshot of the brain metabolome Cell Reports Methods 2023-04-01 [PMID: 37159672] (IHC-FrFl, Mouse)

Juras JA PERIPHERAL AND CENTRAL GLUCOSE FLUX IN TYPE I DIABETES Thesis 2022-01-01 (IHC-Fr, Mouse)

Cornell D, Miwa S, Georgiou M et al. Pseudoislet Aggregation of Pancreatic beta-Cells Improves Glucose Stimulated Insulin Secretion by Altering Glucose Metabolism and Increasing ATP Production Cells 2022-07-29 [PMID: 35954174] (WB, Mouse)

Liu R, Liu C, He X et al. MicroRNA-21 promotes pancreatic beta cell function through modulating glucose uptake Nature communications 2022-06-21 [PMID: 35729232] (WB, Mouse)

Shriwas P, Roberts D, Li Y et al. A small-molecule pan-class I glucose transporter inhibitor reduces cancer cell proliferation in vitro and tumor growth in vivo by targeting glucose-based metabolism Cancer & metabolism 2021-03-26 [PMID: 33771231] (IF/IHC)

Bernard H, Teijeiro A, Chaves-Perez A et al. Coxsackievirus B Type 4 Infection in beta Cells Downregulates the Chaperone Prefoldin URI to Induce a MODY4-like Diabetes via Pdx1 Silencing Cell Reports Medicine 2020-10-01 [PMID: 33205075] (WB, Mouse)

Lei Y, Hu Q, Gu J Expressions of Carbohydrate Response Element Binding Protein and Glucose Transporters in Liver Cancer and Clinical Significance Pathol. Oncol. Res. 2019-08-12 [PMID: 31407220] (IHC-P, Human)

Nakagawa, K;Fujiwara, K;Nishimura, A;Murakami, C;Kawamoto, K;Ichinose, C;Kunitou, Y;Suhara, Y;Okano, T;Hasegawa, H; UBIAD1 Plays an Essential Role in the Survival of Pancreatic Acinar Cells Int J Mol Sci 2019-04-22 [PMID: 31013667] (IF/IHC, Mouse)

Du J, Hu C, Bai J et al. Intestinal Glucose Absorption Was Reduced by Vertical Sleeve Gastrectomy via Decreased Gastric Leptin Secretion Obes Surg 2018-06-18 [PMID: 29915972] (Mouse)

More publications at http://www.novusbio.com/NBP2-22218

Procedures

Western blot protocol for Glucose Transporter GLUT2 antibody (NBP2-22218)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 25 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute anti-Glucose Transporter GLUT2 primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three 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 manufacturers instructions.

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunohistochemistry-Paraffin protocol for Glucose Transporter GLUT2 antibody (NBP2-22218)

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 4 C.
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.

Immunocytochemistry/Immunofluorescence protocol for Glucose Transporter GLUT2 antibody (NBP2-22218)

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.

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

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Products Related to NBP2-22218

NB820-59244	Human Pancreas Whole Tissue Lysate (Adult Whole Normal)
NBP2-22218PEP	Glut2 Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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