Product Datasheet

GLP-1R Antibody - BSA Free
NBP1-97308

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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Publications: 27

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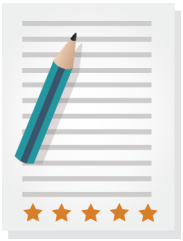
Updated 12/20/2023 v.20.1



NBP1-97308

GLP-1R Antibody - BSA Free

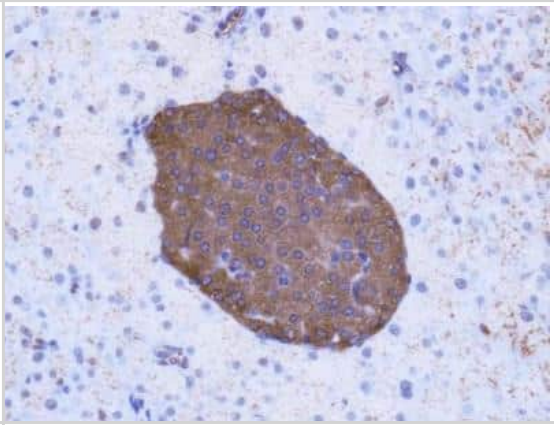
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description	
Host	Rabbit
Gene ID	2740
Gene Symbol	GLP1R
Species	Human, Mouse, Rat, Canine
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 27435156). Canine reactivity reported in scientific literature (PMID: 25747753).
Immunogen	A synthetic peptide made to an internal portion of the human GLP1R protein (between residues 250-350) [UniProt P43220]

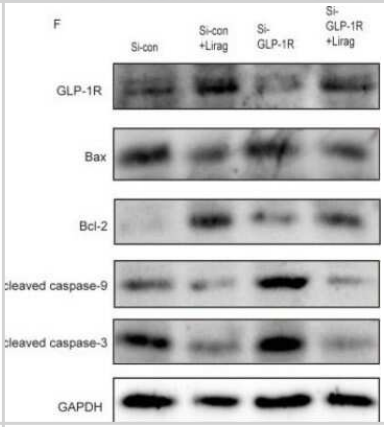
Product Application Details	
Applications	Western Blot, Simple Western, Dot Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:100, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:200 - 1:400, Dot Blot reported in scientific literature (PMID 27435156), Knockdown Validated reported in scientific literature (PMID 31900217)
Application Notes	In WB, a band is seen ~53kDa representing GLP1R. In ICC/IF, membrane staining was observed in HeLa cells. In IHC-P, strong membrane staining was observed in mouse pancreas tissue. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

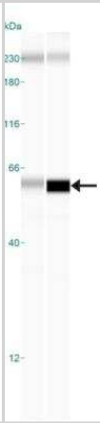
Immunohistochemistry: GLP-1R Antibody [NBP1-97308] - Analysis of GLP1R in mouse pancreas using DAB with hematoxylin counterstain.



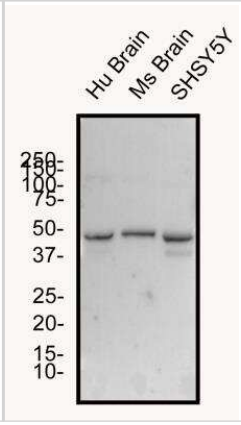
Knockdown Validated: GLP-1R Antibody [NBP1-97308] - Liraglutide reduces apoptosis of hCMSCs via PKA/i2-catenin pathway. The expression of GLP-1R and apoptotic proteins Bax, Bcl-2, cleaved caspase-9, and cleaved caspase-3 were detected by western blot with Si-GLP-1R and liraglutide. Image collected and cropped by Citeab from the following publication (Mesenchymal stem cells combined with liraglutide relieve acute lung injury through apoptotic signaling restrained by PKA/-catenin. Stem Cell Res Ther (2020) licensed under a CC-BY license.

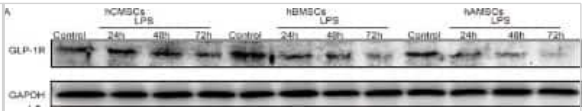
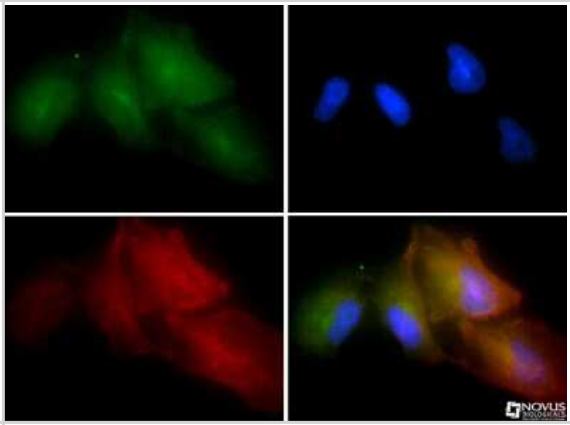
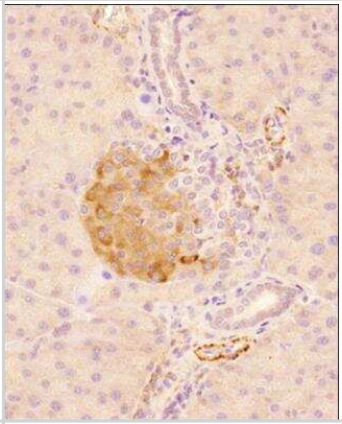
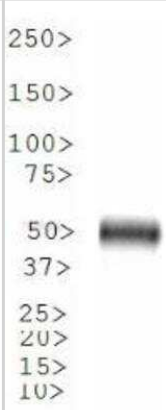


Simple Western: GLP-1R Antibody [NBP1-97308] - Simple Western lane view shows a specific band for GLP-1R in 0.5 mg/ml of Human Pancreas (left) and Mouse Pancreas (right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. * Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody

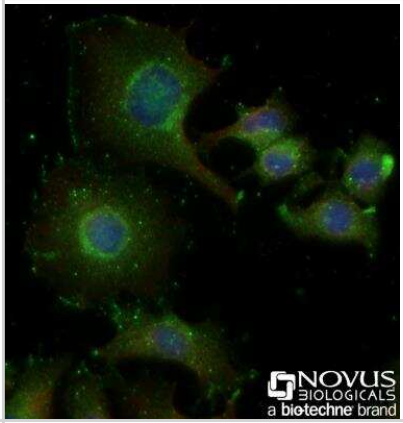


Western Blot: GLP-1R Antibody [NBP1-97308] - Total protein from Human and Mouse brain and SHSY-5Y cells was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-GLP1R in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



Western Blot: GLP-1R Antibody [NBP1-97308] - Expression of GLP-1R in three MSCs at different time points under the stimulation of LPS. The expression of GLP-1R in hCMSCs, hBMSCs, and hAMSCs in the control group and in 30 ug/mL LPS stimulation for 24 h, 48 h, and 72 h at protein. Fluorescence intensity of GLP-1R in hCMSCs Image collected and cropped by Citeab from the following publication (Mesenchymal stem cells combined with liraglutide relieve acute lung injury through apoptotic signaling restrained by PKA/-catenin. Stem Cell Res Ther (2020) licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: GLP-1R Antibody [NBP1-97308] - GLP1R-1 antibody was tested in HeLa cells with FITC (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).	
Immunohistochemistry-Paraffin: GLP-1R Antibody [NBP1-97308] - Tissue section of mouse pancreas using 1:200 dilution of rabbit anti-GLP1R antibody. The staining was developed with HRP labeled anti-rabbit IgG secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin. This GLP1R antibody primarily generated a specific membrane cytoplasmic staining of apparently beta cells in the Islets of Langerhans. The cells of lobular/inter-lobular ducts and the acinar cells were largely negative for GLP1R.	
Western Blot: GLP-1R Antibody [NBP1-97308] - Analysis of GLP1R in human pancreas cell lysate.	

Immunocytochemistry/Immunofluorescence: GLP-1R Antibody [NBP1-97308] - Neuro2a cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton-X100. The cells were incubated with anti-GLP-1R at 5 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:500 dilution. Alpha tubulin (DM1A) NB100-690 was used as a co-stain at a 1:1000 dilution and detected with an anti-mouse Dylight 550 (Red) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



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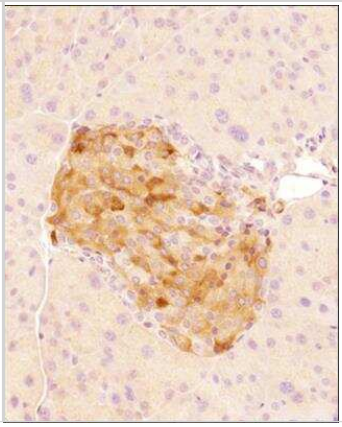

Publications

Cantacorps L, Coull BM, Falck J et al. Gut-derived peptide hormone receptor expression in the developing mouse hypothalamus PLOS ONE 2023-08-17 [PMID: 37590249] (WB)

Li R, She D, Ye Z et al. Glucagon-Like Peptide 1 Receptor Agonist Improves Renal Tubular Damage in Mice with Diabetic Kidney Disease Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy 2022-04-29 [PMID: 35519661] (ICC/IF)

You F, Li C, Zhang S et al. Sitagliptin inhibits the survival, stemness and autophagy of glioma cells, and enhances temozolomide cytotoxicity Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2023-03-24 [PMID: 36966667] (WB, Human)

Details:
Dilution used in WB 1:1000

Wang K, Cui X, Li F et al. Glucagon receptor blockage inhibits β-cell dedifferentiation through FoxO1 American journal of physiology. Endocrinology and metabolism 2022-11-16 [PMID: 36383639] (IHC-P, WB, Mouse)

Li R, Ye Z, She D et al. Semaglutide May Alleviate Hepatic Steatosis in T2DM Combined with NFALD Mice via miR-5120/ABHD6 Drug design, development and therapy 2022-10-12 [PMID: 36238196] (IHC-P, Mouse)

Meurot C, Martin C, Sudre L et al. Liraglutide, a glucagon-like peptide 1 receptor agonist, exerts analgesic, anti-inflammatory and anti-degradative actions in osteoarthritis Scientific reports 2022-01-28 [PMID: 35091584] (IF/IHC, Human)

Mieczkowska A, Bouvard B, Legrand E, Mabilleau G [Gly2]-GLP-2, But Not Glucagon or [D-Ala2]-GLP-1, Controls Collagen Crosslinking in Murine Osteoblast Cultures Frontiers in endocrinology 2021-08-04 [PMID: 34421828] (WB)

Li Y, Xu B, Yang J Et al. Liraglutide protects against lethal renal ischemia-reperfusion injury by inhibiting high-mobility group box 1 nuclear-cytoplasmic translocation and release Pharmacological Research 2021-09-01 [PMID: 34481074] (IF/IHC, WB, Mouse)

Sho H, Fukui K, Yoneda S et al. Insulinoma induces a hyperinsulinemia-mediated decrease of GLUT2 and GLP1 receptor in normal pancreatic beta-cells Biochem Biophys Res Commun 2020-11-13 [PMID: 33199025] (WB, Mouse)

Details:
Western blot analysis performed on Min6 cells cultured in insulin

Nomiyama T, Kawanami T et al. Exendin-4, a GLP-1 receptor agonist, attenuates prostate cancer growth. Diabetes 2014-01-11 [PMID: 24879833] (IF/IHC, Human)

Deng H, Yang F, Ma X et al. Long-Term Liraglutide Administration Induces Pancreas Neogenesis in Adult T2DM Mice Cell Transplant 2020-06-26 [PMID: 32584149] (ICC/IF, Mouse)

Yang X, Ma X, Don O et al. Mesenchymal stem cells combined with liraglutide relieve acute lung injury through apoptotic signaling restrained by PKA/beta-catenin Stem Cell Res Ther 2020-05-19 [PMID: 32429994] (WB, Human)

More publications at http://www.novusbio.com/NBP1-97308

Procedures

Protocol specific for GLP1R antibody (NBP1-97308)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 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 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 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 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 NBP1-97308

NBP1-97308PEP	GLP-1R 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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