Product Datasheet

GLP-1R Antibody - BSA Free
NLS1205

Unit Size: 0.05 ml

Store at 4C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.

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Reviews: 1 Publications: 8

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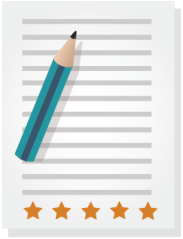
Updated 9/9/2025 v.20.1



NLS1205

GLP-1R Antibody - BSA Free

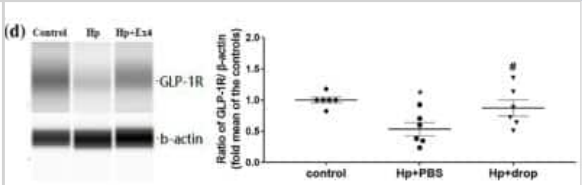
Product Information	
Unit Size	0.05 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	53 kDa

Product Description	
Description	Novus Biologicals Rabbit GLP-1R Antibody - BSA Free (NLS1205) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and Simple Western. Anti-GLP-1R Antibody: Cited in 7 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	2740
Gene Symbol	GLP1R
Species	Human, Mouse, Rat
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 26398375).
Immunogen	A synthetic peptide made to an N-terminal extracellular portion of the human GLP1R protein (between residues 100-200). [UniProt P43220]

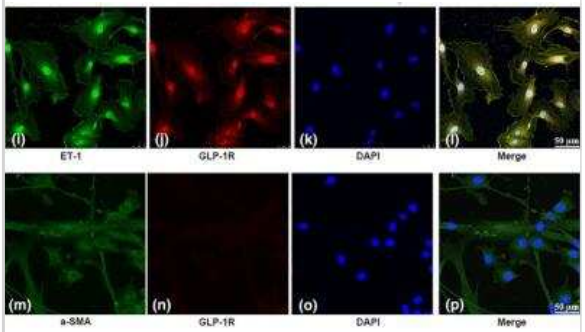
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Microarray
Recommended Dilutions	Western Blot 1 - 2 ug/mL, Simple Western 1:50, Immunohistochemistry 10 - 20 ug/mL, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 32232832), Immunohistochemistry-Paraffin 10 - 20 ug/mL, Microarray reported by customer review
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Hek293 lysate 0.5 mg/mL, Retina, separated by Size, antibody dilution of 1:50, apparent MW was 49 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

Images

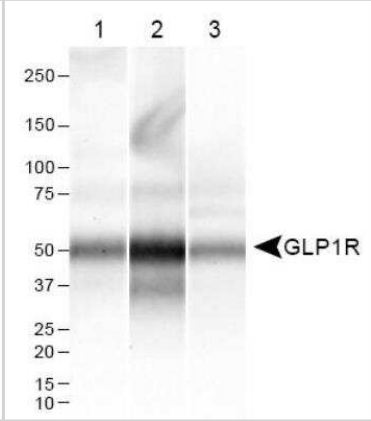
Simple Western: GLP-1R Antibody [NLS1205] - Capillary western blot and fold change in the expression of GLP-1 receptors (GLP-1R) in the rat retina. *P < .05, significantly different from CSF group; #P < .05 significantly different from noradrenaline without exendin-4 group. Image collected and cropped by CiteAb from the following publication (https://bpspubs.onlinelibrary.wiley.com/doi/10.1111/bph.15059) licensed under a CC-BY license.



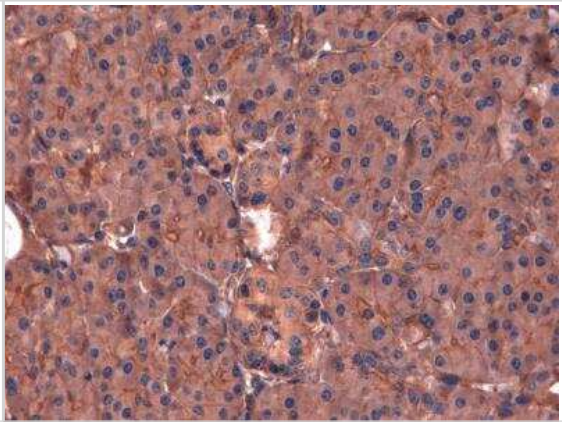
Immunocytochemistry: GLP-1R Antibody [NLS1205] - Expression of GLP-1 receptors in human retinal microvascular endothelial cells (HRMECs). (i) Endothelial cells labelled with endothelin-1 (ET-1) antibodies (green). (j) GLP-1 receptors are labelled in red. (k) DAPI staining indicates the cell nucleus (blue). (l) Merged images. (m-p) Evaluation of GLP-1 receptors expression in human retinal pericytes (HRPs). (m) Pericytes labelled with alpha-SMA antibodies (green). (n) GLP-1 receptors are labelled in red. (o) DAPI staining indicates the cell nucleus (blue). (l and p) merged images. Image collected and cropped by CiteAb from the following publication (https://bpspubs.onlinelibrary.wiley.com/doi/10.1111/bph.15059) licensed under a CC-BY license.

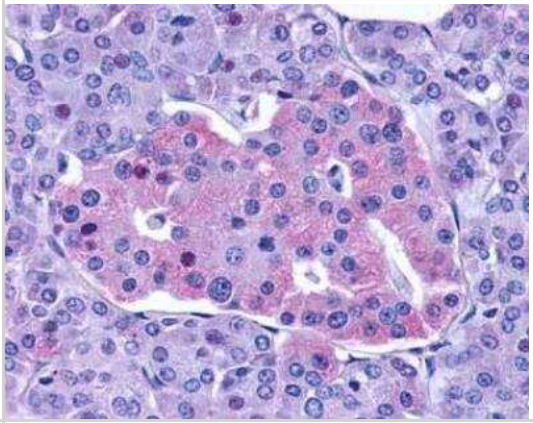
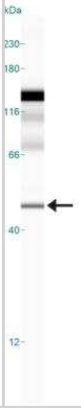
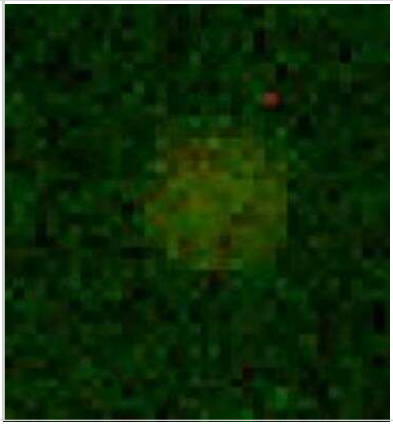


Western Blot: GLP-1R Antibody [NLS1205] - WB detection of GLP-1R in lysates of human (1) pancreas (2) lung and (3) kidney tissues using 2 ug/mL concentration of GLP-1R antibody.

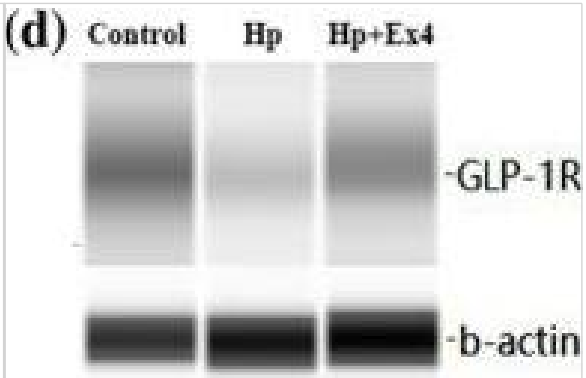


Immunohistochemistry: GLP-1R Antibody [NLS1205] - Analysis of GLP-1R in mouse pancreas.

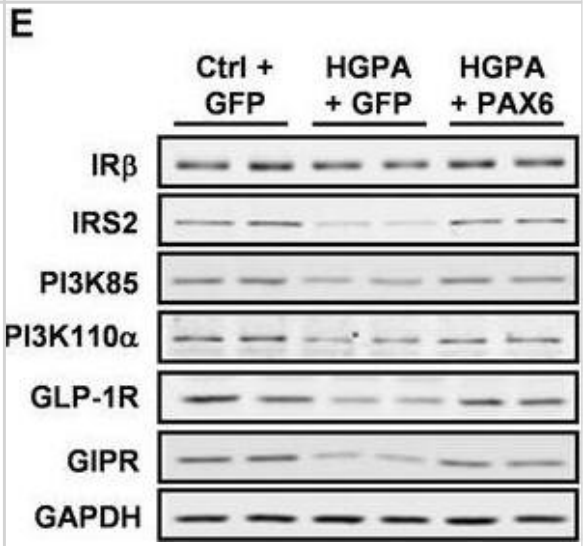


Immunohistochemistry: GLP-1R Antibody [NLS1205] - Human pancreas (Islets of Langerhans).	
Simple Western: GLP-1R Antibody [NLS1205] - Image shows a specific band for GLP-1R in 0.5 mg/mL of HEK293 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Microarray: GLP-1R Antibody [NLS1205] - Antibody was printed on custom arrays and incubated with fluorescently labeled human EDTA plasma. Microarray image submitted by a verified customer review.	

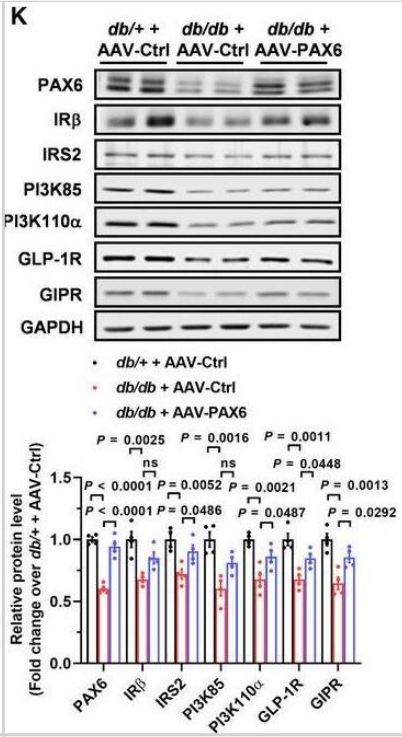
Simple Western: GLP-1R Antibody - BSA Free [NLS1205] - Effect of the administration of exendin□4 on eNOS expression. (a) Capillary western blot of total eNOS & phosphorylated eNOS expression in the rat retina. The red box indicates the target protein. (b & c) Fold change in the expression of total eNOS (b) & phosphorylated eNOS (c) in the rat retina (n = 7 in control group; n = 6 in Hp + PBS group; n = 9 in other groups). (d & e) Capillary western blot & fold change in the expression of GLP□1 receptors (GLP□1R) (d), PI3K, & Akt (e) in the rat retina. *P < .05, significantly different from CSF group; #P < .05significantly different from noradrenaline without exendin□4 group. (f) NO content in human retinal microvascular endothelial cells (n = 6, 5, 5, 6, 7, 5, & 6 for group of control, OGD, OGD + Ex□4, OGD + Ex□4 + Ex□9–39□L, OGD + Ex□4 + Ex□9–39□H, OGD + Ex□4 + l□NAME□L, & OGD + Ex□4 + l□NAME□H, respectively). One□way ANOVA with LSD or Dunnett's T3 test were performed. C, control group; HP, high pressure injury group; EX□4, exendin□4; s.c., subcutaneous injection of exendin□4; i.v., intravitreal injection of exendin□4; od, eye drops of exendin□4; OGD, oxygen glucose deprivation model; EX□9–39□L, low concentration of exendin□9□39 (10 nM); EX□9–39□H, high concentration of exendin□9□39 (20 nM); l□NAME□l, low concentration of l□NAME (50 μM); l□NAME□H, high concentration of l□NAME (100 μM) Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32232832), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



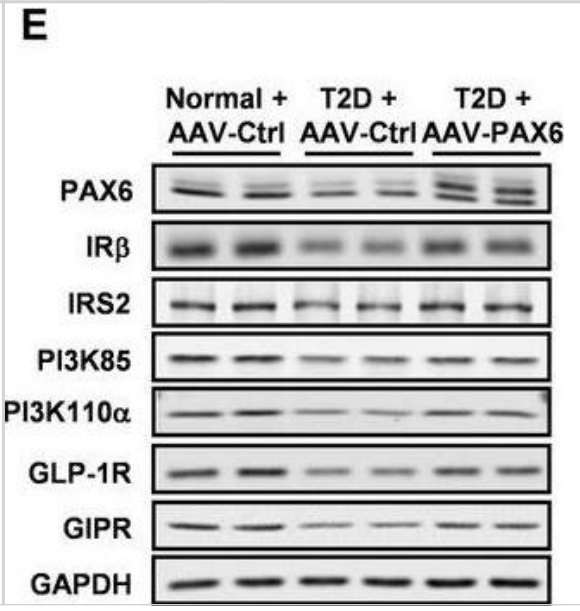
PAX6 down□regulation reduces beta cell survival under diabetic conditionAEndoC□βH1 cells with PAX6 overexpression were subjected to cell proliferation measurement indexed by BrdU labeling after 72□h exposure to normal or HGPA condition with insulin (100 nM), Exendin□4 (10 nM), GIP (10 nM), or IGF1 (50 ng/ml) (n = 8).B–EAfter 72□h exposure to normal or HGPA condition, (B) cell apoptosis (n = 8), (C) GSIS (n = 5), (D) insulin content (n = 8), and (E) protein expression of insulin and incretin signaling components (n = 4) were measured in cells with PAX6 overexpression.FPhosphorylated and total Akt abundance were measured in cells with PAX6 overexpression after 15□min insulin (100 nM) stimulation (n = 4).G, HPhosphorylated and total CREB abundance were measured in cells with PAX6 overexpression after 15□min (G) Exendin□4 (10 nM) or (H) GIP (10 nM) stimulation (n = 4).Data information: Each n represents an independent biological replicate (A–H). Unpaired Student's t□test (A). One□way ANOVA (B–E). Two□way ANOVA (F–H). Data are means +/- SEM. ns, nonsignificant.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37933577), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



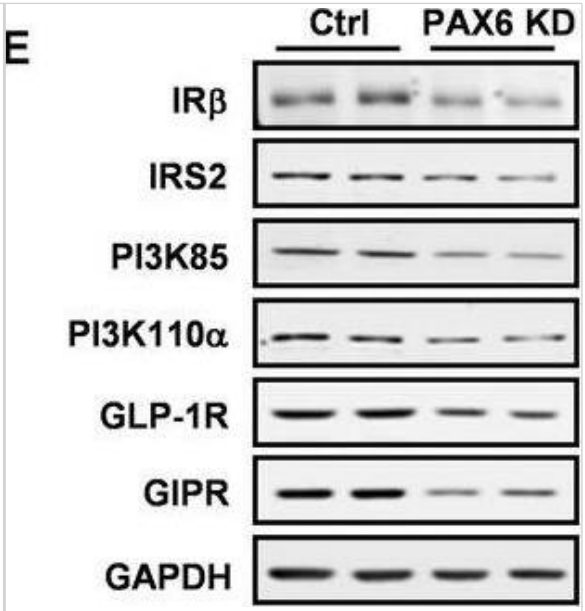
Beta cell□specific PAX6 replenishment preserves beta cells and ameliorates glucose homeostasis in db/db miceA, B(A) Fasting blood glucose and (B) serum insulin of db/+ or db/db mice at the indicated time points after AAV injection (n = 10).CIPGTT of db/+ or db/db mice with AAV injection (n = 10).DGlucose profiles calculated as AUC (n = 10).ESerum insulin during IPGTT expressed as percent of basal (n = 10).F–H(F) Serum glucagon, (G) islet insulin content, and (H) islet apoptosis of db/+ or db/db mice with AAV injection (n = 8–10).I, JRepresentative immunostaining and quantification showing (I) insulin/Ki67 and (J) insulin/TUNEL signals in pancreatic islets of db/+ or db/db mice with AAV injection (n = 6). Scale bar = 20 μm.KProtein expression of insulin and incretin signaling components in pancreatic islets of db/+ or db/db mice with AAV injection (n = 4).Data information: Each n represents the measurement of a sample from distinct mice (A–K). Unpaired Student's t□test and Mann–Whitney test (A–C). db/db + AAV□PAX6 versus db/db + AAV□Ctrl. Unpaired Student's t□test (E). db/db + AAV□PAX6 versus db/db + AAV□Ctrl. One□way ANOVA (D, F–K). Data are means +/- SEM. AUC, area under the curve; ns, nonsignificant.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37933577), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Beta cell□specific PAX6 replenishment enhances beta cell survival and maintains beta cell identity in human T2D isletsA, B(A) Islet insulin content and (B) islet apoptosis of normal or T2D human islets with AAV transduction (n = 8).C, DRepresentative immunostaining and quantification showing (C) insulin/Ki67 and (D) insulin/TUNEL signals in normal or T2D human islets with AAV transduction (n = 5–6). Scale bar = 20 μm.EProtein expression of insulin and incretin signaling components in normal or T2D human islets with AAV transduction (n = 4).FPhosphorylated and total Akt in human islets after 15□min insulin (100 nM) stimulation (n = 4).G, HPhosphorylated and total CREB in human islets after 15□min (G) Exendin□4 (10 nM) or (H) GIP (10 nM) stimulation (n = 4).Data information: Each n represents an independent biological replicate (A–H). One□way ANOVA (A–D). One□way ANOVA and Kruskal–Wallis test (E). (F–H) Two□way ANOVA. Data are means +/- SEM. ns, nonsignificant.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37933577), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



PAX6 is essential to preserve human pancreatic beta cellsAEndoC□βH1 cells with PAX6 knockdown were subjected to cell proliferation measurement indexed by BrdU labeling after 72□h treatment with insulin (100 nM), Exendin□4 (10 nM), GIP (10 nM), or IGF1 (50 ng/ml) (n = 8–10).B–D(B) Cell apoptosis (n = 8), (C) GSIS (n = 5), and (D) insulin content (n = 10–11) were measured in control and PAX6 knockdown cells.EProtein expression of insulin and incretin signaling components in cells with PAX6 knockdown (n = 4).FPhosphorylated and total Akt abundance in cells with PAX6 knockdown were measured after 15□min insulin (100 nM) stimulation (n = 4).G, HPhosphorylated and total CREB abundance in cells with PAX6 knockdown were measured after 15□min (G) Exendin□4 (10 nM) or (H) GIP (10 nM) stimulation (n = 4).I, JcAMP concentration was measured in cells with PAX6 knockdown after 15□min (I) Exendin□4 (10 nM) or (J) GIP (10 nM) stimulation (n = 6–7).Data information: Each n represents an independent biological replicate (A–J). Mann–Whitney test (A). Unpaired Student's t□test (B–E, I, J). Two□way ANOVA (F–H). Data are means +/- SEM. ns, nonsignificant.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37933577), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

So WY, Liao Y, Liu WN et al. Paired box 6 gene delivery preserves beta cells and improves islet transplantation efficacy EMBO molecular medicine 2023-11-07 [PMID: 37933577] (WB, Human)

Details:
1:1000 dilution

de Paiva I, Silva R, Mendonça I et al. Semaglutide Attenuates Anxious And Depressive-Like Behaviors and Reverses The Cognitive Impairment in a Type 2 Diabetes Mellitus Via The Microbiota-Gut-Brain Axis Research Square 2023-09-15 (IHC-P, WB, Mouse)

Wei L, Mo W, Lan S et al. GLP-1 RA Improves Diabetic Retinopathy by Protecting the Blood-Retinal Barrier through GLP-1R-ROCK-p-MLC Signaling Pathway Journal of diabetes research 2022-11-03 [PMID: 36387940] (WB, IHC-P, Mouse)

Eicher AK, Kechele DO, Sundaram N Et al. Functional human gastrointestinal organoids can be engineered from three primary germ layers derived separately from pluripotent stem cells Cell stem cell 2021-11-23 [PMID: 34856121] (IHC-P)

Zhai R, Xu H, Hu F et al. GLP-1 Receptor Agonist Exendin-4 Regulates Retinal Capillary Tone and Restores Microvascular Patency Under Ischemia-reperfusion Injury Br. J. Pharmacol. 2020-03-30 [PMID: 32232832] (ICC/IF, WB, Human)

Kimura T, Obata A, Shimoda M et al. Decreased glucagon-like peptide 1 receptor expression in endothelial and smooth muscle cells in diabetic db/db mice: TCF7L2 is a possible regulator of the vascular glucagon-like peptide 1 receptor Diab Vasc Dis Res 2017-08-01 [PMID: 28830217] (Mouse)

Karabulut S, Coskun ZM, Bolkent S. Immunohistochemical, apoptotic and biochemical changes by dipeptidyl peptidase-4 inhibitor-sitagliptin in type-2 diabetic rats. Pharmacol Rep 2015-10-01 [PMID: 26398375] (Rat)

Matveyenko AV, Dry S, Cox HI et al. Beneficial Endocrine but Adverse Exocrine Effects of Sitagliptin in the Human Islet Amyloid Polypeptide Transgenic Rat Model of Type 2 Diabetes: Interactions With Metformin. Diabetes;58 (7):1604-1615. 2009-01-01 [PMID: 19403868]

Procedures

IHC Protocol specific for GLP1R Antibody (NLS1205)

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 degrees 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.

Western blot Protocol for GLP1R NLS1205

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%.

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Products Related to NLS1205

NB820-59244	Human Pancreas Whole Tissue Lysate (Adult Whole Normal)
NLS1205PEP	GLP-1R Antibody Blocking Peptide
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
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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