Product Datasheet

Melatonin Receptor 1B Antibody - BSA Free
NLS932

Unit Size: 0.05 ml

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

Reviews: 1 Publications: 10

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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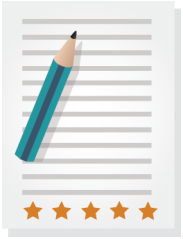
Updated 10/23/2024 v.20.1



NLS932

Melatonin Receptor 1B Antibody - BSA Free

Product Information

Unit Size	0.05 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	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS and 30% Glycerol

Product Description

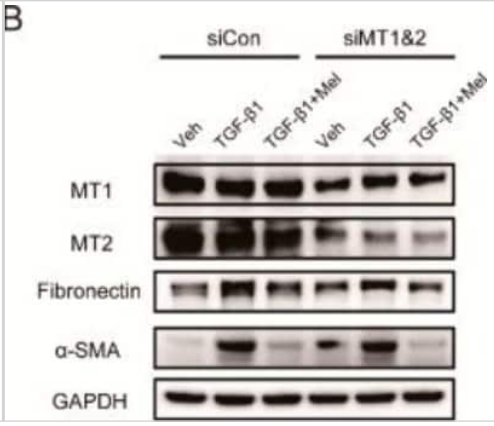
Host	Rabbit
Gene ID	4544
Gene Symbol	MTNR1B
Species	Human, Mouse, Rat, Chicken
Reactivity Notes	Chicken reactivity reported in scientific literature (PMID:32758663).
Immunogen	A synthetic peptide made to an internal region of the human Melatonin Receptor 1B protein (within residues 200-300) [Swiss-Prot P49286].

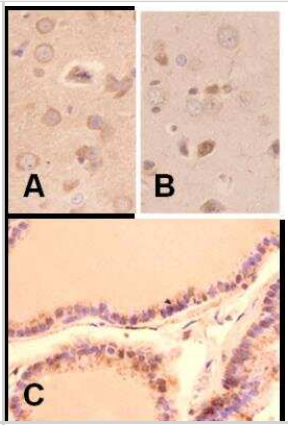
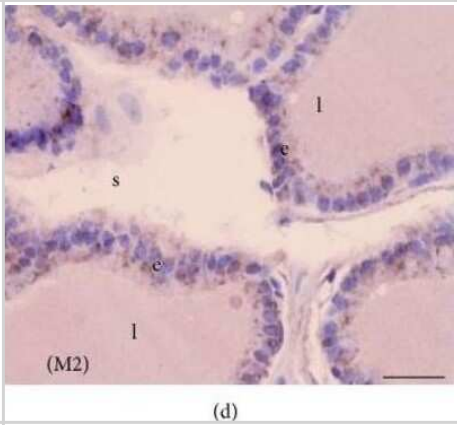
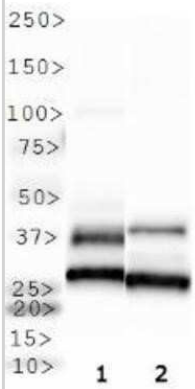
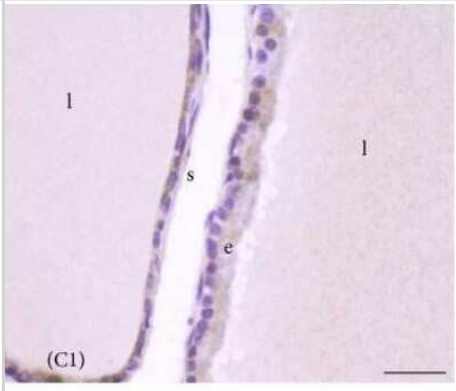
Product Application Details

Applications	Western Blot, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot 1:1000, Immunohistochemistry 1:100, Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen reported in scientific literature (PMID 24365461), Knockdown Validated
Application Notes	Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

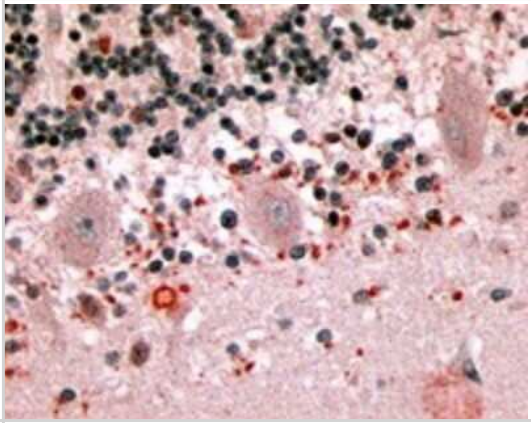
Images

Knockdown Validated: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Melatonin Receptor 1B Antibody [NLS932] - Analysis for collagen I, fibronectin, and Alpha-smooth muscle actin (Alpha-SMA). Cells were treated with TGF-B1 (5 ng/mL) for 24 h after preincubation with Veh or Mel (0.1 mM or 1 mM) for 30 min. The graphs show the results of quantitative analysis of collagen I. Melatonin Prevents Transforming Growth Factor-B1 Stimulated Transdifferentiation of Renal Interstitial Fibroblasts to Myofibroblasts by Suppressing Reactive Oxygen Species-Dependent Mechanisms. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/31906396/) licensed under a CC-BY license.

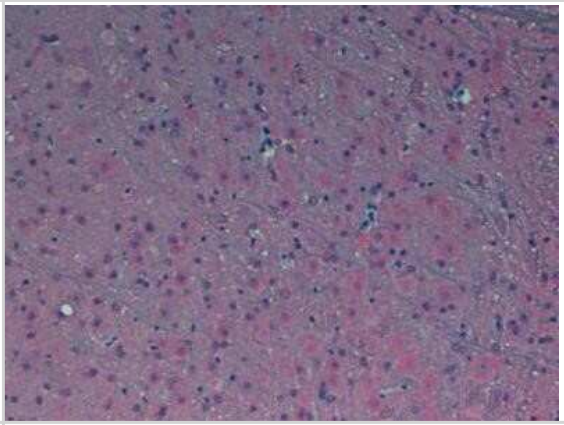


Immunohistochemistry-Paraffin: Melatonin Receptor 1B Antibody [NLS932] - Melatonin receptor type 1 B (MTR1B) in rat tissues fixed in paraformaldehyde and embedded in paraffin. A,B-brain, C-prostate. Image from verified customer review.	
Immunohistochemistry-Paraffin: Melatonin Receptor 1B Antibody [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. Short-term diabetic treated with MLT (MD1) Influence of Melatonin on the Proliferative and Apoptotic Responses of the Prostate under Normal and Hyperglycemic Conditions. *J Diabetes Res* (2015)	
Western Blot: Melatonin Receptor 1B Antibody [NLS932] - Analysis of 1) HepG2 and 2) A431.	
Immunohistochemistry-Paraffin: Melatonin Receptor 1B Antibody [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. Short-term control (C1). Influence of Melatonin on the Proliferative and Apoptotic Responses of the Prostate under Normal and Hyperglycemic Conditions. *J Diabetes Res* (2015)	

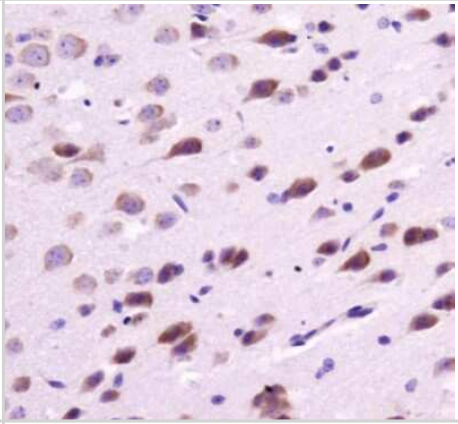
Immunohistochemistry-Paraffin: Melatonin Receptor 1B Antibody [NLS932] - Analysis of Human Brain. 8 ug/ ml.



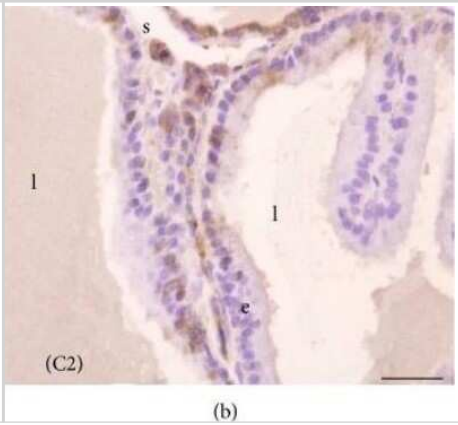
Immunohistochemistry: Melatonin Receptor 1B Antibody [NLS932] - Analysis of Human Brain using Fast Red with hematoxylin counterstain.



Immunohistochemistry: Melatonin Receptor 1B Antibody [NLS932] - Staining of Mouse Brain.

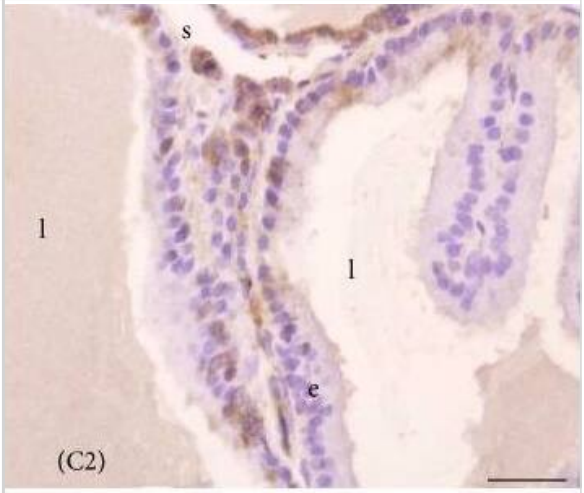


Immunohistochemistry-Paraffin: Melatonin Receptor 1B Antibody [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. Short-term control treated with MLT (M1). Influence of Melatonin on the Proliferative and Apoptotic Responses of the Prostate under Normal and Hyperglycemic Conditions. *J Diabetes Res* (2015)



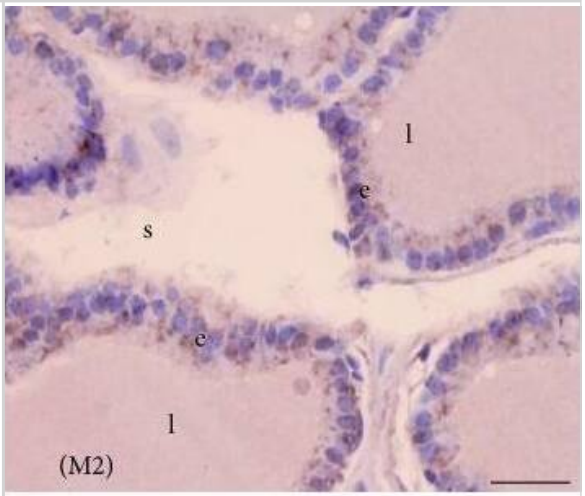
(b)

Immunohistochemistry: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. (a) Short-term control (C1); (b) short-term control treated with MLT (M1); (c) short-term untreated diabetic (D1); (d) short-term diabetic treated with MLT (MD1); (e) long-term control (C2); (f) long-term control treated with MLT (M2); (g) long-term untreated diabetic (D2); (h) long-term diabetic treated with MLT (MD2). (i) Negative control; (j) positive control, brain tissue section of rat. (k) Relative frequency (%) for MTR1B-positive areas. e: epithelium; l: lumen; s: stroma. Magnification: 400x, bar = 25 µm. Light bars: short-term experiment & dark bars: long-term experiment (N = 5 animals/group). Different lowercase letters indicate significant differences between experimental groups C1, M1, D1, & MD1 (nonparametric data), & different capital letters indicate significant differences between groups C2, M2, D2, & MD2 (parametric data), according to ANOVA followed by the Tukey (post hoc) or Kruskal-Wallis test followed by Dunn's test (post hoc). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26295055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



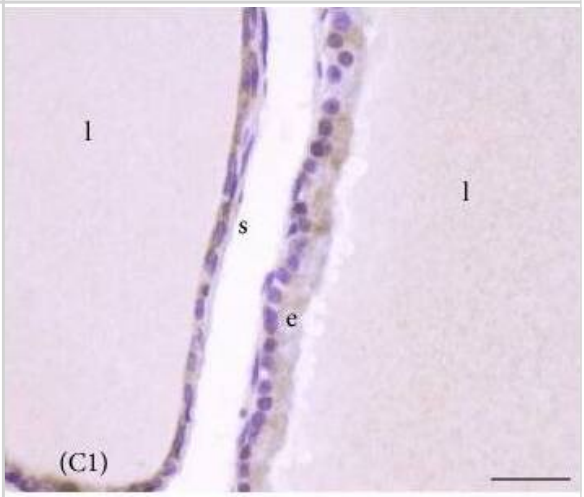
(b)

Immunohistochemistry: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. (a) Short-term control (C1); (b) short-term control treated with MLT (M1); (c) short-term untreated diabetic (D1); (d) short-term diabetic treated with MLT (MD1); (e) long-term control (C2); (f) long-term control treated with MLT (M2); (g) long-term untreated diabetic (D2); (h) long-term diabetic treated with MLT (MD2). (i) Negative control; (j) positive control, brain tissue section of rat. (k) Relative frequency (%) for MTR1B-positive areas. e: epithelium; l: lumen; s: stroma. Magnification: 400x, bar = 25 µm. Light bars: short-term experiment & dark bars: long-term experiment (N = 5 animals/group). Different lowercase letters indicate significant differences between experimental groups C1, M1, D1, & MD1 (nonparametric data), & different capital letters indicate significant differences between groups C2, M2, D2, & MD2 (parametric data), according to ANOVA followed by the Tukey (post hoc) or Kruskal-Wallis test followed by Dunn's test (post hoc). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26295055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



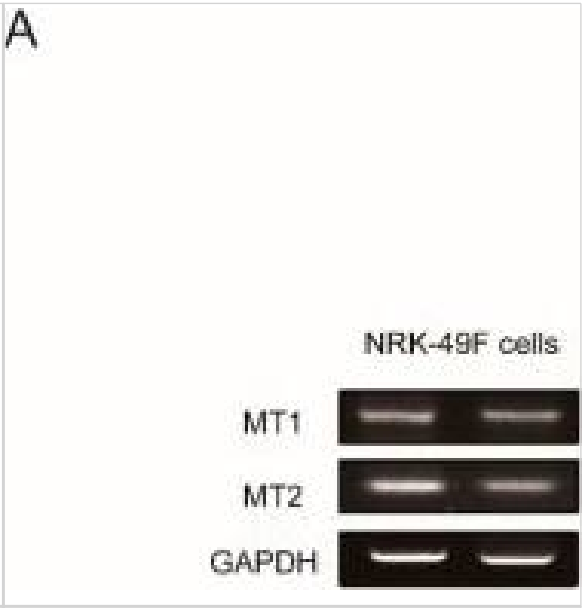
(d)

Immunohistochemistry: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. (a) Short-term control (C1); (b) short-term control treated with MLT (M1); (c) short-term untreated diabetic (D1); (d) short-term diabetic treated with MLT (MD1); (e) long-term control (C2); (f) long-term control treated with MLT (M2); (g) long-term untreated diabetic (D2); (h) long-term diabetic treated with MLT (MD2). (i) Negative control; (j) positive control, brain tissue section of rat. (k) Relative frequency (%) for MTR1B-positive areas. e: epithelium; l: lumen; s: stroma. Magnification: 400x, bar = 25 µm. Light bars: short-term experiment & dark bars: long-term experiment (N = 5 animals/group). Different lowercase letters indicate significant differences between experimental groups C1, M1, D1, & MD1 (nonparametric data), & different capital letters indicate significant differences between groups C2, M2, D2, & MD2 (parametric data), according to ANOVA followed by the Tukey (post hoc) or Kruskal-Wallis test followed by Dunn's test (post hoc). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26295055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

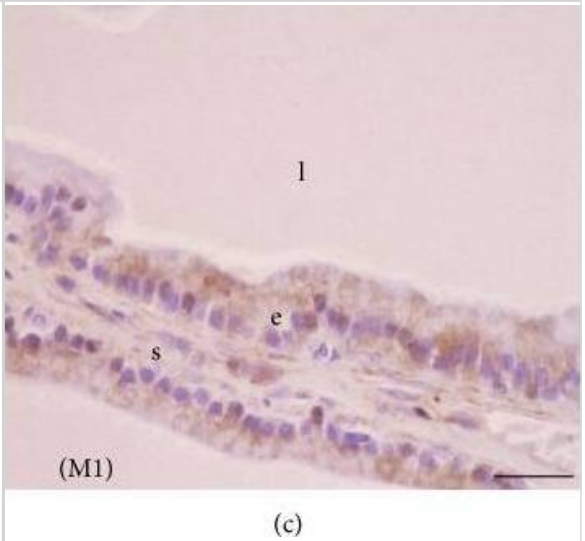


(a)

Western Blot: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Effects of luzindole on inhibitory action of melatonin on TGF-β1 -stimulated proliferation & activation in renal interstitial fibroblasts. (A) Reverse transcription-polymerase chain reaction analysis of melatonin receptor type 1A (MT1) & type 1B (MT2) in NRK-49F cells. (B) NRK-49F cells were treated with with TGF-β1 (5 ng/mL) after preincubation with vehicle (Veh) or melatonin (Mel; 1mM) in the presence or absence of luzindole (Luz; 100 μM) for 30 min. Cell viability was assessed using CCK-8 assay at 0, 24, & 48 h. The OD was measured at 450 nm. (C) Western blot analysis for α-SMA & p-Smad2/3. Cells were treated with TGF-β1 (5 ng/mL) for 24 h after preincubation with Veh or Mel (1 mM) in the presence or absence of luzindole (Luz; 20 μM or 100 μM) for 30 min. The graphs show the results of quantitative analysis of α-SMA (D) & p-Smad2/3 (E). ** $p < 0.01$ & *** $p < 0.001$ vs. Veh-treated cells. #$p < 0.05$ vs. TGF-β1-treated cells. NS: not significant. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31906396), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunohistochemistry: Melatonin Receptor 1B Antibody - BSA Free [NLS932] - Tissue localization of melatonin receptor type 1B (MTR1B) in the ventral prostate of rats. (a) Short-term control (C1); (b) short-term control treated with MLT (M1); (c) short-term untreated diabetic (D1); (d) short-term diabetic treated with MLT (MD1); (e) long-term control (C2); (f) long-term control treated with MLT (M2); (g) long-term untreated diabetic (D2); (h) long-term diabetic treated with MLT (MD2). (i) Negative control; (j) positive control, brain tissue section of rat. (k) Relative frequency (%) for MTR1B-positive areas. e: epithelium; l: lumen; s: stroma. Magnification: 400x, bar = 25 μm. Light bars: short-term experiment & dark bars: long-term experiment (N = 5 animals/group). Different lowercase letters indicate significant differences between experimental groups C1, M1, D1, & MD1 (nonparametric data), & different capital letters indicate significant differences between groups C2, M2, D2, & MD2 (parametric data), according to ANOVA followed by the Tukey (post hoc) or Kruskal-Wallis test followed by Dunn's test (post hoc). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26295055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Mikyung Kim, So Min Lee, Jeeyoun Jung, Yun Jin Kim, Kyo Chul Moon, Ji Hae Seo, Tae Kyung Ha, Eunyoung Ha Pinealectomy increases thermogenesis and decreases lipogenesis Molecular Medicine Reports 2020-11-01 [PMID: 33000192]

Shuntai Yu, Xuefeng Zhang, Zilan Xu, Changlong Hu Melatonin promotes proliferation of neural stem cells from adult mouse spinal cord via the PI3K/AKT signaling pathway. FEBS letters 2020-06-15 [PMID: 31127855]

Yan L, Han X, Zhang M et al. Melatonin exerts neuroprotective effects in mice with spinal cord injury by activating the Nrf2/Keap1 signaling pathway via the MT2 receptor Experimental and Therapeutic Medicine 2023-11-28 [PMID: 38125360] (WB, Mouse)

Wu D, Zhao D, Huang D et al. Estrogen-dependent depressor response of melatonin via baroreflex afferent function and intensification of PKC-mediated Nav1.9 activation Acta pharmacologica Sinica 2022-02-07 [PMID: 35132193] (WB, Rat)

Xu G, Yuan Z, Hou J Et al. Prolonging photoperiod promotes testosterone synthesis of Leydig cells by directly targeting local melatonin system in rooster testes Biology of reproduction 2021-08-17 [PMID: 34401899]

Dong Y, Zhao J, Zhu Q et al. Melatonin inhibits the apoptosis of rooster Leydig cells by suppressing oxidative stress via AKT-Nrf2 pathway activation Free Radic. Biol. Med. 2020-08-03 [PMID: 32758663] (WB, Chicken)

Kim JY, Park JH, Jeon EJ et al. Melatonin Prevents Transforming Growth Factor-beta1-Stimulated Transdifferentiation of Renal Interstitial Fibroblasts to Myofibroblasts by Suppressing Reactive Oxygen Species-Dependent Mechanisms Antioxidants (Basel) 2020-01-01 [PMID: 31906396] (WB, Rat)

Takumida M, Anniko M Localization of melatonin and its receptors (melatonin 1a and 1b receptors) in the mouse inner ear Acta Otolaryngol. 2019-11-01 [PMID: 31561736]

Gobbo MG, Dizeyi N, Abrahamsson PA et al. Influence of Melatonin on the Proliferative and Apoptotic Responses of the Prostate under Normal and Hyperglycemic Conditions. J Diabetes Res. 2015-08-21 [PMID: 26295055] (IHC-P, Rat)

Details:
Melatonin Receptor 1B antibody was used for IHC-P analysis of ventral prostate tissues from normal or hyperglycemic rats that were subjected to Melatonin treatments. The primary antibody was used at 1?:?75 dilution with overnight 4C incubation and detection involved HRP-diaminobenzidine/DAB based detection (Figure 5).

Corthell JT, Olcese J, Trombley PQ. Melatonin in the mammalian olfactory bulb. Neuroscience 2013-12-21 [PMID: 24365461] (IHC-Fr, WB, Mouse)

Procedures

Serum protocol for Melatonin Receptor 1B Antibody (NLS932)

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.

*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 NLS932

NLS932PEP	Melatonin Receptor 1B 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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