Product Datasheet

PER2 Antibody - BSA Free

NB100-125

Unit Size: 0.1 ml

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

Reviews: 3 Publications: 13

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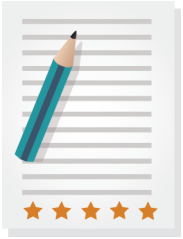
Updated 9/9/2025 v.20.1



NB100-125

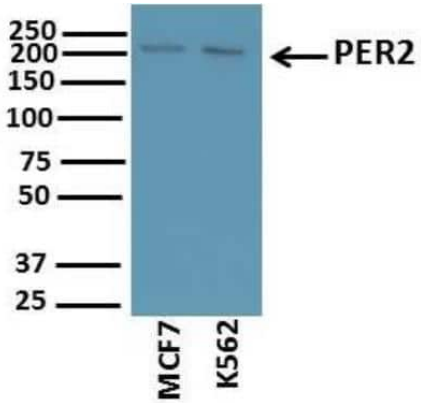
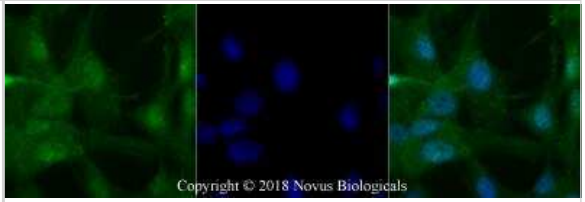
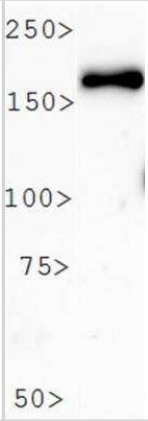
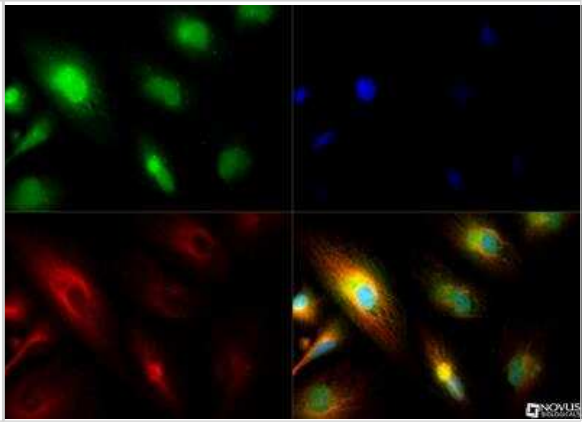
PER2 Antibody - BSA Free

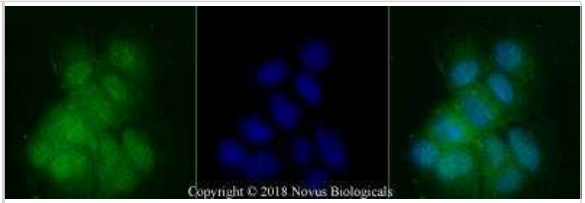
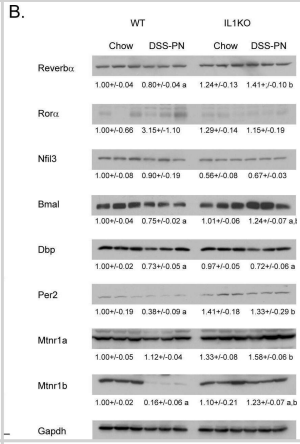
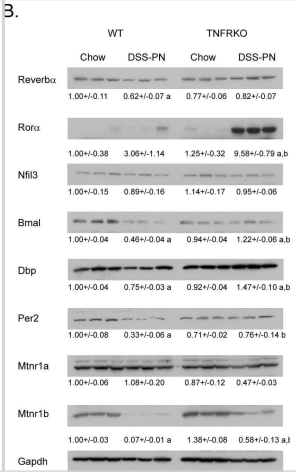
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description	
Description	Novus Biologicals Rabbit PER2 Antibody - BSA Free (NB100-125) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and IP. Anti-PER2 Antibody: Cited in 12 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	8864
Gene Symbol	PER2
Species	Human, Mouse, Rat
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 30016666). Use in Rat reported in scientific literature (PMID:32119846).
Immunogen	A partial synthetic peptide made to an internal portion of the human PER2 protein (between amino acids 100-150) [UniProt# O15055].

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation
Recommended Dilutions	Western Blot 1 - 2 ug/ml, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1:100-1:500, Immunoprecipitation reported in scientific literature (PMID 31390562), Immunohistochemistry-Paraffin 1:200. Use reported in scientific literature (PMID 31822134)
Application Notes	This PER2 antibody is useful in Western blot and Immunocytochemistry/Immunofluorescence. It has been tested against expressed fragment of human PER2 (bacterially expressed fragment from BL21 cells), or full-length protein expressed in in vitro translation using rabbit reticulocyte lysate. In Western blot, a band can be seen at ~200 kDa representing PER2.

Images

Western Blot: PER2 Antibody [NB100-125] - Western Blot Usage of NB100-125. Image submitted via verified customer review.	
Immunocytochemistry/Immunofluorescence: PER2 Antibody [NB100-125] - U-87 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton-X100. The cells were incubated with anti-PER2 Antibody at 5 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Western Blot: PER2 Antibody [NB100-125] - WB analysis of PER2 expression on ARPE-19 whole cell lysate.	
Immunocytochemistry/Immunofluorescence: PER2 Antibody [NB100-125] - The PER2 antibody was tested in ARPE-19 cells at a 1:250 dilution against Dylight 488 (Green). Alpha-tubulin and nuclei were counterstained against Dylight 550 (Red) and DAPI (Blue), respectively.	

Immunocytochemistry/Immunofluorescence: PER2 Antibody [NB100-125] - MCF7 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton-X100. The cells were incubated with anti-PER2 Antibody at 5 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Deletion of IL-1β signaling ameliorates expression of hepatic circadian transcription factors following DSS-PN.8–10 week old IL1KO mice were subjected to Chow feeding or DSS-PN. A. Liver tissue was harvested, and mRNA expression of transcription factors regulating hepatic CR analyzed by qRT-PCR. Expression was normalized against HPRT. Values are Mean+/- SEM, N = at least 3/condition. *p<0.05. **p<0.01, ***P<0.001, ****P<0.0001. B. Western analysis of circadian regulatory proteins. Expression was normalized using Gapdh expression for each blot. Values are Mean+/- SEM, N = 3/condition, a = significantly different from respective chow control, b = significantly different compared to WT DSS-PN. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37647292), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Genetic inhibition of TNFα signaling normalizes expression of hepatic circadian transcription factors following DSS-PN.8–10 week old TNFRKO mice were subjected to Chow feeding or DSS-PN. A. Liver tissue was harvested, and mRNA expression of transcription factors regulating hepatic CR analyzed by qRT-PCR. Expression was normalized against HPRT. N = 4 per condition. Values are Mean+/- SEM. *p<0.05. **p<0.01, ***p<0.001. B. Western analysis of circadian regulatory proteins. Expression was normalized using Gapdh expression for each blot. Values are Mean+/- SEM, N = 3/condition, a = significantly different from respective chow control, b = significantly different compared to WT DSS-PN. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37647292), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Bie P, Su D, Gao Y et al. Per2 deficiency in microglia alleviates motor dysfunction by inhibiting ferroptosis in spinal cord injury Communications Biology 2025-08-16 [PMID: 40819187]

Shearn, CT;Anderson, AL;Devereaux, MW;El Kasmi, KC;Orlicky, DJ;Sokol, RJ; Expression of circadian regulatory genes is dysregulated by increased cytokine production in mice subjected to concomitant intestinal injury and parenteral nutrition PloS one 2023-08-30 [PMID: 37647292] (Western Blot)

Fu J, Fan Z, He L et al. Circadian clock disruption in autoimmune thyroiditis European Thyroid Journal 2023-10-01 [PMID: 37548297] (Western Blot)

de Zavalia N, Schoettner K, Goldsmith JA Et al. Bmal1 in the striatum influences alcohol intake in a sexually dimorphic manner Communications biology 2021-10-26 [PMID: 34702951] (Western Blot)

Ding Z, Ge W, Xu X et al. PER2/P65-driven glycogen synthase 1 transcription in macrophages modulates gut inflammation and pathogenesis□of rectal prolapse J Biol Chem 2023-09-01 [PMID: 37660913] (Western Blot)

Jang D, Yang B, You M et al. Fluoxetine decreases phagocytic function via REV-ERB alpha in microglia Research Square 2022-07-05 [PMID: 36048349]

Sheng-Long Ding, Tai-Wei Zhang, Qi-Chen Zhang, Wang Ding, Ze-Fang Li, Guan-Jie Han, Jin-Song Bai, Xi-Lei Li, Jian Dong, Hui-Ren Wang, Li-Bo Jiang Excessive mechanical strain accelerates intervertebral disc degeneration by disrupting intrinsic circadian rhythm Experimental & Molecular Medicine 2021-12-21 [PMID: 34934193]

Oyama y, Shuff SR, Burns N et al. Intense light elicited alveolar type 2 specific circadian PER2 protects from bacterial lung injury via BPIFB1 American journal of physiology. Lung cellular and molecular physiology 2022-03-10 [PMID: 35272486] (WB, Mouse)

Li S, Zhai J, Chu W et al. Altered circadian clock as a novel therapeutic target for constant darkness-induced insulin resistance and hyperandrogenism of polycystic ovary syndrome Transl Res 2020-02-12 [PMID: 32119846] (WB, Rat)

Details:
Sprague-Dawley Rats

Zhang XY, Wang L, Yan WJ et al. Period 2-Induced Activation of Autophagy Improves Cardiac Remodeling After Myocardial Infarction Hum. Gene Ther. 2019-12-10 [PMID: 31822134] (IHC-P, Mouse)

Oyama Y, Bartman CM, Bonney S et al. Intense Light-Mediated Circadian Cardioprotection via Transcriptional Reprogramming of the Endothelium Cell Rep 2019-08-08 [PMID: 31390562] (IP, Human)

Dong E, Guidotti A, Zhang H et al. Prenatal stress leads to chromatin and synaptic remodeling and excessive alcohol intake comorbid with anxiety-like behaviors in adult offspring Neuropharmacology 2018-09-15 [PMID: 30016666] (WB, Mouse)

More publications at http://www.novusbio.com/NB100-125

Procedures

Western Blot Protocol Specific for NB100-125: PER2 Antibody (NB100-125)
PER2 Antibody:
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%.

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

Immunocytochemistry/Immunofluorescence protocol for PER2 Antibody (NB100-125)
PER2 Antibody:
Immunocytochemistry Protocol

Culture cells to appropriate density on suitable glass coverslips 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 5-10 minutes.
2. Remove the formalin and add 0.5% Triton-X 100 in TBS to permeabilize the cells. Incubate for 5-10 minutes.
3. Remove the permeabilization buffer and add wash buffer (i.e. PBS or PBS with 0.1% Tween-20). Be sure to not let the specimen dry out. Gently wash three times for 10 minutes.
4. Alternatively, cells can be fixed with -20C methanol for 10 min at room temperature. Remove the methanol and rehydrate in PBS for 10 min before proceeding.
5. To block nonspecific antibody binding incubate in 10% normal goat serum for 1 hour at room temperature.
6. Add primary antibody at appropriate dilution and incubate at room temperature for 1 hour or at 4C overnight.
7. Remove primary antibody and replace with wash buffer. Gently wash three times for 10 minutes.
8. Add secondary antibody at the appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove antibody and replace with wash buffer. Gently wash three times for 10 minutes.
10. Nuclei can be staining with 4',6' diamino phenylindole (DAPI) at 0.1 ug/ml, or coverslips can be directly mounted in media containing DAPI.
11. Cells can now be viewed with a fluorescence microscope.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow proper laboratory procedures for the disposal of formalin.

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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

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