Product Datasheet

PGC1 alpha Antibody
NBP1-04676

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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### 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 |
| **Target Molecular Weight** | 91 kDa |

### Product Description

| **Host** | Rabbit |
| **Gene ID** | 10891 |
| **Gene Symbol** | PPARGC1A |
| **Species** | Human, Mouse, Rat, Hamster, Squirrel |
| **Immunogen** | Synthetic peptide made to an internal portion of the human PGC-1 alpha protein (within residues 400-550). [Swiss-Prot# Q9UBK2]. |

### Product Application Details

| **Applications** | Western Blot, Chromatin Immunoprecipitation, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation |
| **Recommended Dilutions** | Western Blot, Chromatin Immunoprecipitation, Flow Cytometry, Immunohistochemistry 1:10-1:500, Immunocytochemistry/Immunofluorescence 1:1000, Immunoprecipitation, Immunohistochemistry-Paraffin 1:200, Immunohistochemistry-Frozen, Flow (Intracellular) |
| **Application Notes** | In WB, a band is seen at ~91 kDa representing PGC-1 alpha. In IHC-P, staining is very strong in the nucleus with some cytoplasmic staining. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. Use in ICC reported in scientific literature (PMID: 24508229). Use in IP reported in scientific literature (PMID: 24769256). Use in IHC-Frozen reported in scientific literature (PMID: 25981953). ChIP data based on customer review. |
Western Blot: PGC1 alpha Antibody [NBP1-04676] - Total protein from human adipose and skeletal muscle tissue, HeLa and A431 cells lines was separated on a 7.5% 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-PGC1-alpha in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.


Immunohistochemistry-Paraffin: PGC1 alpha Antibody [NBP1-04676] - Analysis of a FFPE section of mouse prostate using rabbit polyclonal PGC1 alpha antibody at 1:200 dilution. The antibody generated an expected strong nuclear (punctate in some cells) and a weak cytoplasmic staining in the glandular cells lining of tubule-alveolar gland.

Western Blot: PGC1 alpha Antibody [NBP1-04676] - Total protein from murine skeletal muscle tissue. Image from verified customer review.
Immunocytochemistry/Immunofluorescence: PGC1 alpha Antibody [NBP1-04676] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti-PGC-1 alpha [NBP1-04676] at a 1:200 dilution 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.

Immunocytochemistry/Immunofluorescence: PGC1 alpha Antibody [NBP1-04676] - NIH-3T3 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton X-100. The cells were incubated with anti-PGC1 alpha at 2 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.

Immunocytochemistry/Immunofluorescence: PGC1 alpha Antibody [NBP1-04676] - PC12 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton X-100. The cells were incubated with anti-PGC1 alpha at 2 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.

Flow (Intracellular): PGC1 alpha Antibody [NBP1-04676] - An intracellular stain was performed on HepG2 cells with NBP1-04676 and a matched isotype control. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, DyLight 550 (SA5-10033, Thermo Fisher).
Flow (Intracellular): PGC1 alpha Antibody [NBP1-04676] - An intracellular stain was performed on HeLa cells with PGC1 alpha Antibody NBP1-04676AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.

Publications


Cox CS, McKay SE, Holmbeck MA et al. Mitohormesis in Mice via Sustained Basal Activation of Mitochondrial and Antioxidant Signaling Cell Metab. Aug 13 2018 12:00AM [PMID: 30122556] (WB, Mouse)


Finlin BS, Memetimin H, Confides AL et al. Human adipose beiging in response to cold and mirabeegron JCI Insight Aug 9 2018 12:00AM [PMID: 30089732] (WB, Human)

kuefner MS, Deng X, Stephenson EJ et al. Secretory phospholipase A2 group IIA enhances the metabolic rate and increases glucose utilization in response to thyroid hormone. FASEB J. Jul 18 2018 12:00AM [PMID: 30020829] (WB, Mouse)


Procedures

Protocol specific for PGC-1 alpha Antibody (NBP1-04676)
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).

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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<tbody>
<tr>
<td>NBL1-14636</td>
<td>PGC1 alpha Overexpression Lysate (Native)</td>
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<tr>
<td>HAF008</td>
<td>Goat anti-Rabbit IgG Secondary Antibody [HRP (Horseradish Peroxidase)]</td>
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<tr>
<td>NB7156</td>
<td>Goat anti-Rabbit IgG (H+L) Secondary Antibody</td>
</tr>
<tr>
<td>NBP2-24891</td>
<td>Rabbit IgG Isotype Control</td>
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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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