PPAR delta Antibody

<table>
<thead>
<tr>
<th>Tested Species Reactivity</th>
<th>Published Species Reactivity</th>
</tr>
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<tbody>
<tr>
<td>Human (Hu)</td>
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<tr>
<td>Mouse (Ms)</td>
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<tr>
<td>Rat (Rt)</td>
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### Tested Applications

<table>
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<tr>
<th>Tested Applications</th>
<th>Dilution</th>
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<tr>
<td>Western Blot (WB)</td>
<td>1:500</td>
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<tr>
<td>Immunofluorescence (IF)</td>
<td>1:100</td>
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<tr>
<td>Immunohistochemistry (Frozen) (IHC (F))</td>
<td>1:200</td>
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### Published Applications

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<tr>
<td>Western Blot (WB)</td>
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<td>Immunohistochemistry (IHC)</td>
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<tr>
<td>Immunoprecipitation (IP)</td>
<td>See publications</td>
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* Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own experiment using appropriate negative and positive controls.

### Details

- **Catalog Number:** PA1-823A
- **Size:** 100 µl
- **Class:** Polyclonal
- **Type:** Antibody
- **Clone:** Rabbit /
- **Immunogen:** Synthetic peptide corresponding to residues M(1) E Q P Q E E T P E A R E E(14) C of mouse PPAR delta.

### Form Information

- **Form:** Liquid
- **Concentration:** 1mg/ml
- **Purification:** Antigen affinity chromatography
- **Storage Buffer:** 1mg/ml BSA
- **Preservative:** 0.05% sodium azide
- **Storage Conditions:** -20° C, Avoid Freeze/Thaw Cycles

### General Information

Peroxisome proliferators are non-genotoxic carcinogens which are purported to exert their effect on cells through their interaction with members of the nuclear hormone receptor family, termed peroxisome proliferator activated receptors (PPARs). Nuclear hormone receptors are ligand-dependent intracellular proteins that stimulate transcription of specific genes by binding to specific DNA sequences following activation by the appropriate ligand.

Studies indicate that PPARs are activated by peroxisome proliferators such as clofibric acid, nafenopin, and WY-14,643, as well as by some fatty acids. It has also been shown that PPARs can induce transcription of acyl coenzyme A oxidase & cytochrome P450 A6 (CYP450 A6) through interaction with specific response elements. PPAR alpha is activated by free fatty acids including linoleic, arachidonic, and oleic acids. Induction of peroxisomes by this mechanism leads to a reduction in blood triglyceride levels. PPAR alpha is expressed mainly in skeletal muscle, heart, liver, and kidney and is thought to regulate many genes involved in the beta-oxidation of fatty acids. Activation of rat liver PPAR alpha has been shown to suppress hepatocyte apoptosis. PPAR delta, like several other nuclear hormone receptors, heterodimerizes with retinoic X receptor (RXR) alpha to form a transcriptionally competent complex. PPAR delta is also known as FAAR.

The corresponding gene for the PPAR delta is NR1C2.

This product is for in vitro experimental use only. Not for resale without express authorization.
Western Blot analysis of PPAR delta was performed by loading 25 µg of NIH-3T3 (Lane 1), PC12 (Lane 2), and K562 (Lane 3) cell lysates and a molecular weight protein ladder onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with a blocking buffer at 4°C overnight. The membrane was probed with a PPAR delta polyclonal antibody (Product # PA1-823A) at a dilution of 1:2000 (NIH-3T3 and K562) and 1:1000 (PC12) overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Results show a band at 49 kDa in all three cell lysates.
### 5 Western Blot References

<table>
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| Ms / 1:1,000       | PA1-823A was used in immunocytochemistry and western blot to investigate the role of peroxisome proliferator-activated receptors and related transcription factors in differentiating astrocyte cultures.  
"Peroxisome proliferator-activated receptors (PPARs) and related transcription factors in differentiating astrocyte cultures."  
Author(s): Cristiano L, Cimini A, Moreno S, Ragnelli AM, Paola Cerù M  
Number of Citations: 1  
| Ms / Not Cited     | PA1-823A was used in immunoprecipitation and western blot to study the protective effects of PPAR-delta activation in diabetic nephropathy.  
"Activation of peroxisome proliferator-activated receptor delta inhibits streptozotocin-induced diabetic nephropathy through anti-inflammatory mechanisms in mice."  
Author(s): Matsushita Y, Ogawa D, Wada J, Yamamoto N, Shikata K, Sato C, Tachibana H, Toyota N, Makino H  
Number of Citations: 1  
| Rt / Not Cited     | PA1-823A was used in western blot to investigate the effect of PPARgamma activation on the growth and morphology of B12 oligodendrocyte-like cells  
"PPAR gamma activators induce growth arrest and process extension in B12 oligodendrocyte-like cells and terminal differentiation of cultured oligodendrocytes."  
Author(s): Roth AD, Leisewitz AV, Jung JE, Cassina P, Barbeito L, Inestrosa NC, Bronfman M  
Number of Citations: 1  
| Rt / 1:500         | PA1-823A was used in western blot to investigate PPAR delta expression in the lungs of diabetic rats induced by streptozotocin  
"Increase of peroxisome proliferator-activated receptor delta gene expression in the lungs of streptozotocin-induced diabetic rats."  
Author(s): Huang CJ, Liu IM, Cheng JT  
Number of Citations: 1  
| Rt / Not Cited     | PA1-823A was used in western blot to indicate the role of neuregulins in oxidative capacity and insulin sensitivity in muscle cells  
Diabetes. 2007 Sep;56(9):2185-93.  
"Neuregulins increase mitochondrial oxidative capacity and insulin sensitivity in skeletal muscle cells."  
Author(s): Cantó C, Pich S, Paz JC, Sanches R, Martinez V, Orpinell M, Palacín M, Zorzano A, Gumà A  
Number of Citations: 1  

### 3 Immunocytochemistry References

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| Hu / 1:2000        | PA1-823A was used in immunocytochemistry and immunohistochemistry to compare normal human and rat urothelium in terms of PPAR expression and proliferation-associated phenotypes  
"Trans-species comparison of PPAR and RXR expression by rat and human urothelial tissues."  
Author(s): Chopra B, Hinley J, Oleksiewicz MB, Southgate J  
Number of Citations: 1  
Ms / 1:100

PA1-823A was used in immunocytochemistry and western blot to investigate the role of peroxisome proliferator-activated receptors and related transcription factors in differentiating astrocyte cultures

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<td>&quot;Genetic- or transforming growth factor-beta 1-induced changes in epidermal peroxisome proliferator-activated receptor beta/delta expression dictate wound repair kinetics.&quot;</td>
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<tr>
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<td>Author(s): Tan NS, Michalik L, Desvergne B, Wahl W</td>
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Ms / Not Cited

PA1-823A was used in immunohistochemistry to investigate the role of Wnt signaling for blastocyst competency for implantation

"Inactivation of nuclear Wnt-beta-catenin signaling limits blastocyst competency for implantation."
Author(s): Xie H, Tranguch S, Jia X, Zhang H, Das SK, Dey SK, Kuo CJ, Wang H
Number of Citations: 1

Rt / 1:500

PA1-823A was used in immunohistochemistry to investigate the influence of urine acidification on signal pathways in urinary bladder urothelium

"Urinary acidification has no effect on peroxisome proliferator-activated receptor (PPAR) signaling or epidermal growth factor (EGF) expression in rat urinary bladder urothelium."
Number of Citations: 1

Rt / 1:1,000

PA1-823A was used in immunocytochemistry and immunohistochemistry to compare normal human and rat urothelium in terms of PPAR expression and proliferation-associated phenotypes

"Trans-species comparison of PPAR and RXR expression by rat and human urothelial tissues."
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1 Immunoprecipitation Reference

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Author(s): Matsushita Y, Ogawa D, Wada J, Yamamoto N, Shikata K, Sato C, Tachibana H, Toyota N, Makino H

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