# Datasheet for Anti-Phosphotyrosine antibody [PY20] ab10321

**Overview**

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Phosphotyrosine antibody [PY20]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Mouse monoclonal [PY20] to Phosphotyrosine</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Mouse</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: WB, ICC/IF, IHC-P, IHC-FoFr</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Species independent</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Chemical/ Small Molecule corresponding to Phosphotyrosine conjugated to keyhole limpet haemocyanin.</td>
</tr>
</tbody>
</table>

**General notes**

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

**Properties**

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
</tr>
</tbody>
</table>
| **Storage buffer** | pH: 7.40  
Preservative: 0.02% Sodium azide  
Constituents: PBS, 6.97% L-Arginine  
Contains 0.4M Arginine |
| **Purity**      | Protein G purified |
| **Primary antibody notes**  | This is a standard clone used to detect phosphotyrosine. |
| **Clonality**   | Monoclonal |
Clone number: PY20
Isotype: IgG2b

Applications

The Abpromise guarantee

Our Abpromise guarantee covers the use of ab10321 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>🌟🌟🌟🌟 🌟 (4)</td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>1/200.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
<tr>
<td>IHC-FoFr</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
</tbody>
</table>

Target

Relevance

The phosphorylation of specific tyrosine residues has been shown to be a primary mechanism of signal transduction during normal mitogenesis, cell cycle progression and oncogenic transformation, its role in other areas such as differentiation and gap junction communication, is a matter of active and ongoing research. Antibodies that specifically recognize phosphorylated tyrosine residues have proved to be invaluable to the study of tyrosine phosphorylated proteins and the biochemical pathways in which they function.

Images

All lanes: Anti-Phosphotyrosine antibody [PY20] (ab10321) at 1 µg/ml

Lane 1: NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 2: NIH 3T3 treated with Vanadate and PDGF Whole Cell Lysate

Lysates/proteins at 5 µg per lane.

Secondary

All lanes: Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.
Performed under reducing conditions.

**Exposure time:** 1 minute

Cells were serum starved overnight and then incubated at room temperature for 10 mins in a final concentration of 1 mM sodium vanadate. PDGF was then added at a final concentration of 5 ng/ml and cells were incubated at 37°C for 30 mins. Vanadate inhibits endogenous phosphatases and PDGF stimulates phosphorylation. Western blots of NIH 3T3 cell lysates treated with vanadate and PDGF show an array of phosphorylated tyrosine compared to controls.


Protocol: IHC free-floating protocol using 4% PFA fixed brain tissue. Rats were intracardially perfused with 4% PFA. Tissue was post-fixed overnight in the same fixative, cryoprotected in 20% sucrose and frozen in OCT. Primary antibody ab10321 was used at 1 ug/ml incubated overnight at room temperature. Secondary antibody was Alexa Fluor 488 used at 1/1000, 2h incubation at room temperature. Image recoloured in Adobe photoshop.
Immunofluorescent staining with ab10321 mouse monoclonal [PY20] phosphotyrosine antibody in the rat spinal cord. Cells stained appear to be microglial cells. Picture taken with X40 objective. Protocol: IHC free-floating protocol using 4% PFA fixed spinal cord tissue. Rats were intracardially perfused with 4% PFA. Tissue was post-fixed overnight in the same fixative, cryoprotected in 20% sucrose and frozen in OCT. Primary antibody ab10321 was used at 1µg/ml incubated overnight at room temperature. Secondary antibody was Alexa Fluor 488 used at 1/1000, 2h incubation at room temperature. Image recoloured in Adobe photoshop.

IHC image of ab10321 staining in Human Normal Hippocampus formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab10321, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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