# Product datasheet

## Anti-GFP antibody ab6673

| ★★★★☆ | 18 Abreviews | 264 References | 10 Images |

### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-GFP antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Goat polyclonal to GFP</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Goat</td>
</tr>
<tr>
<td><strong>Specificity</strong></td>
<td>Anti-GFP assayed by ELISA for direct binding of antigen recognizes wild type, recombinant and enhanced forms of GFP.</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: WB, IP, ELISA, ICC/IF, IHC-P, IHC-FrFl, IHC-Fr</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Species independent</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Fusion protein corresponding to <em>Aequorea victoria</em> GFP aa 1-246. Database link: <a href="https://www.ncbi.nlm.nih.gov/protein/P42212">P42212</a></td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>IHC: E5.5 Hex-GFP transgenic mouse embryo. WB: HeLa cells. Green Fluorescent protein.</td>
</tr>
</tbody>
</table>

### 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. Avoid freeze / thaw cycle.</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>pH: 7.20</td>
</tr>
<tr>
<td></td>
<td>Preservative: 0.01% Sodium azide</td>
</tr>
<tr>
<td></td>
<td>Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Affinity purified</td>
</tr>
<tr>
<td><strong>Purification notes</strong></td>
<td>This product was prepared from monospecific antiserum by immunoaffinity chromatography using Green Fluorescent Protein (<em>Aequorea victoria</em>) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities.</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
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</table>

### Applications

Our [Abpromise guarantee](http://www.abcam.com/abpromise) covers the use of ab6673 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Relevance

Function: Energy-transfer acceptor. Its role is to transduce the blue chemiluminescence of the protein aequorin into green fluorescent light by energy transfer. Fluoresces in vivo upon receiving energy from the Ca\(^{2+}\)-activated photoprotein aequorin.

Subunit structure: Monomer.

Tissue specificity: Photocytes.

Post-translational modification: Contains a chromophore consisting of modified amino acid residues. The chromophore is formed by autocatalytic backbone condensation between Ser-65 and Gly-67, and oxidation of Tyr-66 to didehydrotyrosine. Maturation of the chromophore requires nothing other than molecular oxygen.

Biotechnological use: Green fluorescent protein has been engineered to produce a vast number of variously colored mutants, fusion proteins, and biosensors. Fluorescent proteins and its mutated allelic forms, blue, cyan and yellow have become a useful and ubiquitous tool for making chimeric proteins, where they function as a fluorescent protein tag. Typically they tolerate N- and C-terminal fusion to a broad variety of proteins. They have been expressed in most known cell types and are used as a noninvasive fluorescent marker in living cells and organisms. They enable a wide range of applications where they have functioned as a cell lineage tracer, reporter of gene expression, or as a measure of protein-protein interactions. Can also be used as a molecular thermometer, allowing accurate temperature measurements in fluids. The measurement process relies on the detection of the blinking of GFP using fluorescence correlation spectroscopy.

Sequence similarities: Belongs to the GFP family.

Biophysicochemical properties: Absorption: Abs(max)=395 nm
Exhibits a smaller absorbance peak at 470 nm. The fluorescence emission spectrum peaks at

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td><img src="image1" alt="Rating" /> <img src="image2" alt="Rating" /> <img src="image3" alt="Rating" /> <img src="image4" alt="Rating" /> <img src="image5" alt="Rating" /></td>
<td>1/400 - 1/2000. (for immunoprecipitated GFP, see Abview).</td>
</tr>
<tr>
<td>IP</td>
<td>Use at an assay dependent concentration.</td>
<td></td>
</tr>
<tr>
<td>ELISA</td>
<td><img src="image6" alt="Rating" /> <img src="image7" alt="Rating" /> <img src="image8" alt="Rating" /> <img src="image9" alt="Rating" /> <img src="image10" alt="Rating" /></td>
<td>1/40000. This antibody can be used to detect GFP by ELISA (sandwich or capture) for the direct binding of antigen and recognizes wild type, recombinant and enhanced forms of GFP.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/500.</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td><img src="image11" alt="Rating" /> <img src="image12" alt="Rating" /> <img src="image13" alt="Rating" /> <img src="image14" alt="Rating" /> <img src="image15" alt="Rating" /></td>
<td>1/200 - 1/1000.</td>
</tr>
<tr>
<td>IHC-FrFI</td>
<td>Use at an assay dependent concentration.</td>
<td></td>
</tr>
<tr>
<td>IHC-Fr</td>
<td><img src="image16" alt="Rating" /> <img src="image17" alt="Rating" /> <img src="image18" alt="Rating" /> <img src="image19" alt="Rating" /> <img src="image20" alt="Rating" /></td>
<td>1/200 - 1/1000.</td>
</tr>
</tbody>
</table>
Pth4:eGFP transgenic zebrafish embryos at 1 and 2 dpf were fixed with 4% PFA and washed in PBST. They were then washed in PBDT (1% BSA, 1% DMSO, 0.1% Triton X-100 in PBS, pH 7.4), blocked in 10% normal goat serum/PBDT, and incubated overnight at 4°C with primary antibodies to HuC/D (1/100) and GFP (1/400, Abcam ab6673). Further PBST washes and blocking were followed by secondary antibodies overnight at 4°C. Hoechst 34580 was added to stain nuclei (1/2500). After further PBDT and PBS washes, embryos were mounted for confocal imaging.

Abbreviation: e, eye; hy, hypothalamus; m, midbrain; sc, spinal cord. Scale bars: 100 μm (A-C) 50 μm (D-G).

In utero electroporation of Disc1 and Disc1-100P constructs into wild-type neocortex and analysis at P21.

(Panel D-E") Expression of the constructs was assessed.

(Panel D-D") 2 days after transfection in vitro.

(Panel E-E") at P21 in vivo.

Immunostaining for FLAG and GFP showed that constructs encoding either WT Disc1, the Disc1-100P variant, or GFP alone, expressed these protein species in transfected HEK-293 cells in vitro (Fig 5D–5D") and in P21 postmitotic cortical neurons in vivo (Fig 5E–5E")
Immunofluorescence for assessment of GFP+ myofibers in rat tissue.

VML affected muscle from the 50% MG + HA+LMN group were probed for the presence of GFP. GFP+ fibers were detected in a qualitatively similar magnitude at both 2 and 8 weeks post-injury indicating viable engraftment of donor derived muscle progenitor cells. Scale bars are 1mm for whole mount images, 50 μm for regions of interest.

A portion of the TA muscle from the defect region was embedded in a talcum-based gel, frozen in 2-methylbutane, and supercooled in liquid nitrogen. Cryosections (8 μm) were prepared and stained using standard protocols for hematoxylin & eosin.

ab6673 used at a 1/100 dilution.

Mouse small intestines were washed with DPBS and fixed overnight at 4°C in Zinc formalin. Following sectioning and tissue deparaffinization, antigen retrieval was performed with 10mM Tris base (pH 9.0) buffer using a pressure cooker.

For immunohistochemistry, sections were quenched of endogenous peroxidases by 3% H2O2, and sequentially blocked with Avidin D, biotin, and protein blocking reagents. Primary antibody incubation was added at a dilution of 1/200, and incubated 2 hours at room temperature. Finally, sections were stained according to the ABC peroxidase protocol and counterstained with hematoxylin.

ab6673 used at a 1/200 dilution.

Panel D: Representative anti-eGFP immunofluorescence of macroH2A WT and DKO jejunum counterstained with DAPI (blue).
All lanes: Anti-GFP antibody (ab6673) at 1 µg/ml (o/n at 4degC)

Lane 1: HEK-293 (Human epithelial cell line from embryonic kidney) lysate at 10 µg
Lane 2: HeLa (Human epithelial cell line from cervix adenocarcinoma) lysate at 10 µg
Lane 3: CHO/K1 lysate at 10 µg
Lane 4: MDA-MB-231 (Human breast adenocarcinoma cell line) lysate at 10 µg
Lane 5: A431 (Human epidermoid carcinoma cell line) lysate at 10 µg
Lane 6: Jurkat (Human T cell leukemia cell line from peripheral blood) lysate at 10 µg
Lane 7: NIH/3T3 (Mouse embryo fibroblast cell line) lysate
Lane 8: E-coli HCP control, 50 ng
Lane 9: FLAG Positive control lysate at 10 µg
Lane 10: Red fluorescent protein, 50 ng
Lane 11: Green fluorescent protein, 50 ng
Lane 12: Glutathione-S-Transferase protein, 50 ng
Lane 13: Maltose Binding protein, 50 ng

Secondary
All lanes: Peroxidase goat secondary antibody, 60 min at RT at 1/30000 dilution

Blocking Buffer: 1% Casein-TTBS for 30 min at RT.

E5.5 Hex-GFP transgenic mouse embryo stained for GFP using ab6673 at 1/500 dilution. Secondary antibody is a fluorochrome conjugated anti-goat IgG secondary antibody at 1/10,000 for 45 min at RT.

Staining: GFP as green fluorescent signal with DAPI blue counterstain.
**Western blot - Anti-GFP antibody (ab6673)**

**All lanes**: Anti-GFP antibody (ab6673) at 1 µg/ml

**Lane 1**: HeLa (Human epithelial cell line from cervix adenocarcinoma) cells

**Lane 2**: Mock transfected HeLa cell lysate

Lysates/proteins at 35 µg per lane.

**Secondary**

**All lanes**: IRDye® 800 conjugated Donkey-a-Goat IgG [H&L] at 1/2500 dilution

**Additional bands at**: 33 kDa. We are unsure as to the identity of these extra bands.

**Western blot - Anti-GFP antibody (ab6673)**

This image is courtesy of an anonymous abreview.

**All lanes**: Anti-GFP antibody (ab6673) at 1/1000 dilution

**Lane 1**: MRC5VA lung fibroblast whole cell lysate overexpressing EGFP alone

**Lanes 2-3**: MRC5VA lung fibroblast whole cell lysate overexpressing an EGFP fusion protein

Lysates/proteins at 15 µg per lane.

**Secondary**

**All lanes**: HRP-conjugated anti-goat polyclonal at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Observed band size**: 27,55 kDa

*why is the actual band size different from the predicted?*

**Exposure time**: 5 seconds
Immunofluorescence of TGN mouse liver labeling GFP on hepatocytes with ab6673.

Immunohistochemistry of GFP transgenic mouse liver labeling GFP with ab6673.

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