# Anti-Cofilin antibody ab42824

<table>
<thead>
<tr>
<th>Overview</th>
<th>anti-Cofilin antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
<td>Rabbit polyclonal to Cofilin</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: IHC-FoFr, ICC/IF, WB, IHC-P</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human</td>
</tr>
<tr>
<td><strong>Predicted to work with</strong></td>
<td>Sheep, Cow, Pig</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide corresponding to Human Cofilin aa 150 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as ab42823)</td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>WB: Recombinant Human Cofilin protein (ab62958), HeLa, Jurkat, A431, HEK293, MCF7, SHSY-5Y, PC12 and NIH 3T3 whole cell lysates. ICC/IF: HeLa cells. IHC-P: Human breast carcinoma tissue.</td>
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## Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
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<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>
<tr>
<td><strong>Storage buffer</strong></td>
<td>Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
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## Applications

Our Abpromise guarantee covers the use of ab42824 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
### Function
Controls reversibly actin polymerization and depolymerization in a pH-sensitive manner. It has the ability to bind G- and F-actin in a 1:1 ratio of cofilin to actin. It is the major component of intranuclear and cytoplasmic actin rods.

### Tissue specificity
Widely distributed in various tissues.

### Sequence similarities
Belongs to the actin-binding proteins ADF family. Contains 1 ADF-H domain.

### Post-translational modifications
Phosphorylated on Ser-3 in resting cells.

### Cellular localization
Nucleus matrix. Cytoplasm > cytoskeleton. Almost completely in nucleus in cells exposed to heat shock or 10% dimethyl sulfoxide.

### Images

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-FoFr</td>
<td>★★★★★</td>
<td>1/2000 - 1/3000.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★★★</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 20 kDa (predicted molecular weight: 19 kDa).</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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</table>

**Target**

**Function**
Controls reversibly actin polymerization and depolymerization in a pH-sensitive manner. It has the ability to bind G- and F-actin in a 1:1 ratio of cofilin to actin. It is the major component of intranuclear and cytoplasmic actin rods.

**Tissue specificity**
Widely distributed in various tissues.

**Sequence similarities**
Belongs to the actin-binding proteins ADF family. Contains 1 ADF-H domain.

**Post-translational modifications**
Phosphorylated on Ser-3 in resting cells.

**Cellular localization**
Nucleus matrix. Cytoplasm > cytoskeleton. Almost completely in nucleus in cells exposed to heat shock or 10% dimethyl sulfoxide.

**Images**

**All lanes**: Anti-Cofilin antibody (ab42824) at 1 µg/ml

**Lane 1**: HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
**Lane 2**: Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
**Lane 3**: A431 (Human epithelial carcinoma cell line) Whole Cell Lysate
**Lane 4**: HEK293 Human embryonic kidney cell line Whole Cell Lysate
**Lane 5**: MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate
**Lane 6**: SHSY-5Y (Human neuroblastoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.
Secondary

All lanes: IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 19 kDa
Observed band size: 20 kDa

Why is the actual band size different from the predicted?

ICC/IF image of ab42824 stained human HeLa cells. The cells were PFA fixed (10 min), permabilised in TBS-T (20 min) and incubated with the antibody (ab42824, 1µg/ml) for 1h at room temperature. 1% BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

IHC image of Cofilin staining in human breast carcinoma FFPE section, performed on a 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 ab42824, 1µg/ml, for 8 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.
Anti-Cofilin antibody (ab42824) at 1 µg/ml + Recombinant Human Cofilin protein (ab62958) at 0.01 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

**Predicted band size:** 19 kDa

**All lanes:** Anti-Cofilin antibody (ab42824) at 1 µg/ml

- **Lane 1:** PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate
- **Lane 2:** NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

- **All lanes:** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 19 kDa

**Observed band size:** 20 kDa *why is the actual band size different from the predicted?*

**Exposure time:** 30 seconds
This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab42824 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

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

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