abcam

ab185655

# Anti-c-Myc (phospho T58) antibody [EPR17923]

Lab Essentials | Recombinant | RabMAb | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR17923 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.742 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Dot

### Tested

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 1/250 |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/700 |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information MYC pT58

| | |
|---|---|
| **Function** | Transcription factor that binds DNA in a non-specific manner, yet also specifically recognizes the core sequence 5'-CAC[GA]TG-3' (PubMed:24940000, PubMed:25956029). Activates the transcription of growth-related genes (PubMed:24940000, PubMed:25956029). Binds to the VEGFA promoter, promoting VEGFA production and subsequent sprouting angiogenesis (PubMed:24940000, PubMed:25956029). Regulator of somatic reprogramming, controls self-renewal of embryonic stem cells (By similarity). Functions with TAF6L to activate target gene expression through RNA polymerase II pause release (By similarity). Positively regulates transcription of HNRNPA1, HNRNPA2 and PTBP1 which in turn regulate splicing of pyruvate kinase PKM by binding repressively to sequences flanking PKM exon 9, inhibiting exon 9 inclusion and resulting in exon 10 inclusion and production of the PKM M2 isoform (PubMed:20010808). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | C-Myc also known simply as Myc or MYC protein is a transcription factor with significant roles in cellular processes. Its estimated molecular weight is approximately 62 kDa. This protein is expressed in various tissues and cell types including common use in HEK (human embryonic kidney) cells for research. c-Myc functions by regulating transcription of genes involved in cell cycle progression apoptosis and cellular transformation. |
| **Biological function summary** | C-Myc is involved in regulating cell growth and proliferation. It forms part of the Myc/Max complex which binds to DNA to regulate gene expression. This activity affects cellular metabolism ribosome biogenesis and cell cycle entry emphasizing its regulation of cellular energy and stress response. Its expression levels critically govern normal cellular functions and homeostasis. |
| **Pathways** | C-Myc plays an important role in the cell cycle pathway and apoptosis regulation. Specifically c-Myc is associated with the Wnt signaling pathway which influences cellular proliferation and differentiation. It also interacts with other proteins like Cyclin D1 influencing cell cycle control. These interactions ensure c-Myc's involvement in regulating key processes related to cell proliferation and stability. |
| **Associated diseases and disorders** | C-Myc is tightly linked to cancer such as Burkitt's lymphoma and colon cancer. In these conditions c-Myc overexpression contributes to uncontrolled cell proliferation. Additionally c-Myc is associated with other oncogenic proteins like BCL2 in tumorigenesis highlighting its pivotal role in cancer development and progression. Understanding c-Myc's involvement in these diseases aids in the development of targeted therapeutic strategies. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

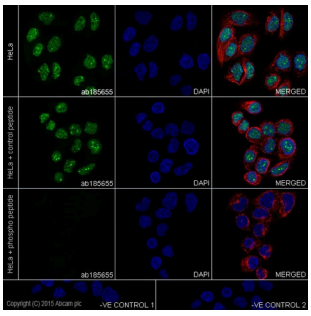
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

## 6 product images




### Immunocytochemistry/ Immunofluorescence - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

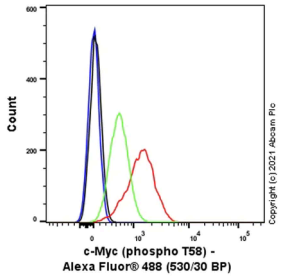
C-Myc (phospho T58) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-c-Myc (phospho T58) antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa cells (Human epithelial cells from cervix adenocarcinoma) labeling c-Myc (phospho T58) with ab185655 at 1/250, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 (green).
Confocal image showing nuclear staining on HeLa cells. The staining decreased after blocking with phospho peptide (100µg/ml) overnight. The control peptide is a non-phospho peptide.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody -Loading Control (ab7291) at 1/1000 dilution Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/500 (red).

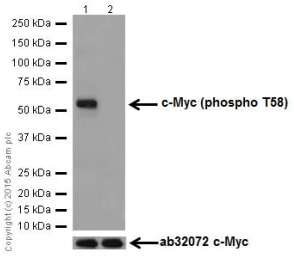
The negative controls are as follows:-
-ve control 1 - ab185655 at 1/500 followed by ab150120 at 1/500.
-ve control 2 -ab7291 at 1/1000 followed by ab150077 at 1/500.




### Flow Cytometry (Intracellular) - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

C-Myc (phospho T58) Flow Cytometry (Intracellular) staining using rabbit Anti-c-Myc (phospho T58) antibody

Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) treated with 200nM Calyculin A and 1uM Okadaic Acid for 60 min cells labeling c-Myc with purified ab185655 at 1/700 dilution (1 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).




# Western blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

C-Myc (phospho T58) Western blot staining using rabbit Anti-c-Myc (phospho T58) antibody

Blocking and diluting buffer was 5% NFDM /TBST.
The strong band in Lane 1 of WB-2 compared to WB-1 is due to different lysate batches and a lower dilution factor (1:1000).

All lanes:
Western blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655) at 1/1000 dilution

Lane 1:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 µg

Lane 2:
HeLa (Human epithelial cell line from cervix adenocarcinoma) treated with Lambda Phosphatase whole cell lysate at 10 µg

Secondary

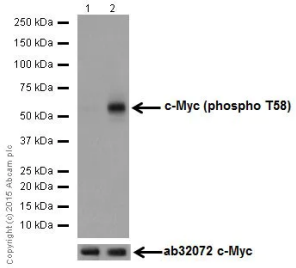
All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 48 kDa

Observed band size: 57 kDa

Exposure time: 3min




## Western blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

C-Myc (phospho T58) Western blot staining using rabbit Anti-c-Myc (phospho T58) antibody

Blocking and diluting buffer was 5% NFDM /TBST
All lanes:
Western blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655) at 1/5000 dilution

Lane 1:
Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma ) whole cell lysate at 10 µg

Lane 2:
HeLa (Human epithelial cell line from cervix adenocarcinoma ) treated with 200nM Calyculin A and 1uM Okadaic Acid for 60 minutes whole cell lysate at 10 µg

Secondary

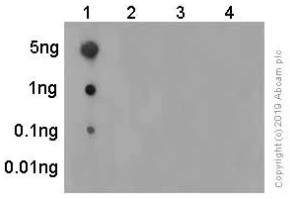
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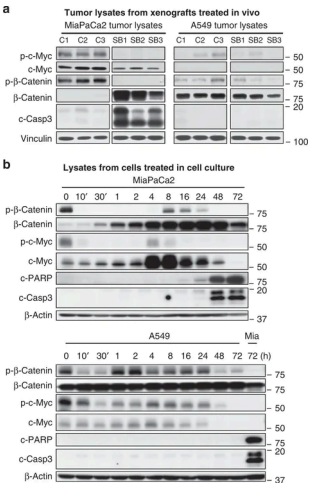



## Dot Blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

**Lane 1:** c-Myc (phospho T58).
**Lane 2:** c-Myc (pT58) non-phospho peptide.
**Lane 3:** c-Myc (pS62) phospho peptide.
**Lane 4:** c-Myc (pS62) non-phospho peptide.
Dot blot analysis using ab185655 at a dilution of 1/1000. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) was used as the secondary antibody at a dilution of 1/100000.

**Blocking and dilution buffer:** 5% NFDM/TBST.

**Exposure time:** 3 minutes.




## Western blot - Anti-c-Myc (phospho T58) antibody [EPR17923] (ab185655)

c-Myc (phospho T58) western blot using anti-c-Myc (phospho T58) antibody [EPR17923] ab185655. Publication image and figure legend from Kazi, A., Xiang, S., et al., 2018, Nat Commun, PubMed 30514931.

ab185655 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab185655 please see the product overview.

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SB blocks the phosphorylation of β-catenin S33/S37/T41 and T58 c-Myc. a Western blots of MiaPaCa2 and A549 tumor lysates from xenografts resected from mice treated with vehicle or SB. C1, C2, and C3 are tumors from mice treated with vehicle control. SB1, SB2, and SB3 are tumors from mice treated with SB. Experiment was done once. b Western blot of MiaPaCa2 and A549 cells treated with 1 μM SB for various lengths of time. Mia designates MiaPaCa2 lysates used as positive control. Experiment was done twice

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