abcam

ab185656

Anti-c-Myc (phospho S62) antibody [EPR17924]

Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656) is a rabbit monoclonal antibody detecting c-Myc in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, Dot Blot**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 40 publications

Lab Essentials | Recombinant | RabMAb | Advanced Validation | 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	EPR17924
Purification technique	Affinity purification Protein A
Concentration	1.806 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Dot

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/150
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	5 µg
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MYC pS62

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

What is this antibody validated in?
Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), Dot Blot in Human, Mouse, Rat samples.

What is the molecular weight of c-Myc?
Anti-c-Myc (phospho S62) [EPR17924] (ab185656) specifically detects a band for c-Myc (UniProt: P01106) at a molecular weight of 48kDa.

Trusted by the scientific community
Anti-c-Myc (phospho S62) [EPR17924] (ab185656) was first used in a scientific publication in 2015 and has been cited over 40 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR17924] also available for your convenience: ab185656, Carrier free - ab232691, PE - ab305731, APC - ab305732, HRP - ab305733, Alkaline Phosphatase - ab308652, Alexa Fluor® 488 - ab309626, Alexa Fluor® 647 - ab309992, Alexa Fluor® 594 - ab310355, Alexa Fluor® 555 - ab311877, Alexa Fluor® 568 - ab312346, Alexa Fluor® 750 - ab321295

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our

selection of trial-size antibodies.

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.

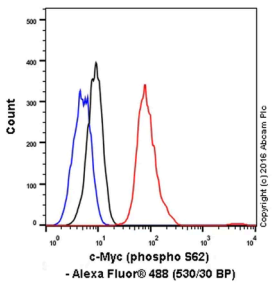
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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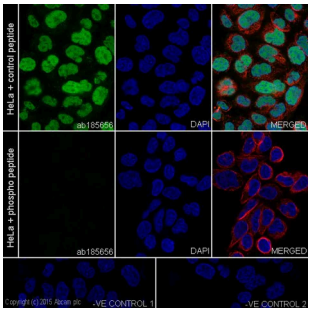
12 product images



Flow Cytometry (Intracellular) - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

C-Myc (phospho S62) Flow Cytometry (Intracellular) staining using rabbit Anti-c-Myc (phospho S62) antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling c-Myc (phospho S62) with purified ab185656 at 1/150 dilution (red). The secondary antibody was Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution. A Rabbit monoclonal IgG (Black) was used as the isotype control and cells without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

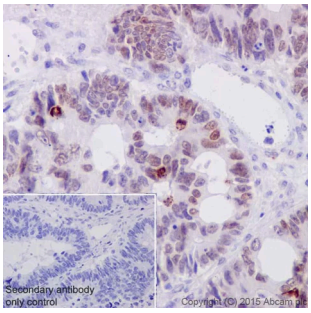
C-Myc (phospho S62) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-c-Myc (phospho S62) antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling c-Myc (phospho S62) with ab185656 at 1/1000 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (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 counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab185656 at 1/1000 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

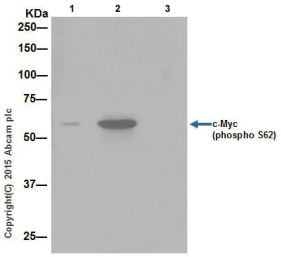
C-Myc (phospho S62) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-c-Myc (phospho S62) antibody

Immunohistochemical analysis of paraffin-embedded Human endometrium cancer tissue labeling c-Myc (phospho S62) with ab185656 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on cancer cells of Human endometrial cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

c-Myc (phospho S62) was immunoprecipitated from 1mg of HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate treated with 200nM TPA for 10 minutes with ab185656 at 1/50 dilution.
Western blot was performed from the immunoprecipitate using ab185656 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1/1500 dilution.

Lane 1: HeLa whole cell lysate treated with 200nM TPA for 10 minutes,10 µg (Input).

Lane 2: ab185656 IP in HeLa whole cell lysate treated with 200nM TPA for 10 minutes.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab185656 in HeLa whole cell lysate treated with 200nM TPA for 10 minutes.

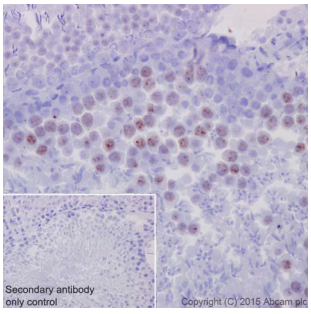
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

Predicted band size: 48 kDa

Observed band size: 58 kDa

Exposure time: 5s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

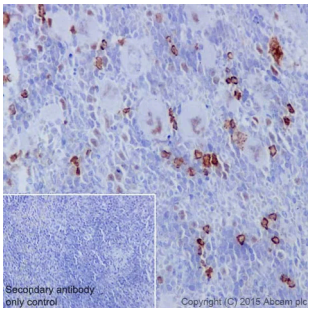
C-Myc (phospho S62) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-c-Myc (phospho S62) antibody

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling c-Myc (phospho S62) with ab185656 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on rat testis is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

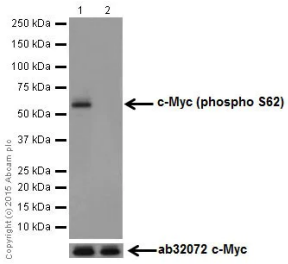
C-Myc (phospho S62) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-c-Myc (phospho S62) antibody

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling c-Myc (phospho S62) with ab185656 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear and cytoplasmic staining on mouse spleen is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

C-Myc (phospho S62) Western blot staining using rabbit Anti-c-Myc (phospho S62) antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656) at 1/5000 dilution

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

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

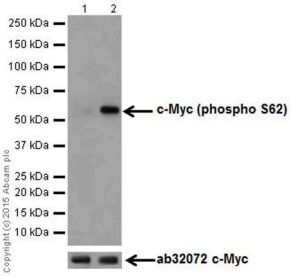
Secondary

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

Predicted band size: 48 kDa

Observed band size: 57 kDa

Exposure time: 1min



Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

C-Myc (phospho S62) Western blot staining using rabbit Anti-c-Myc (phospho S62) antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656) at 1/5000 dilution

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

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

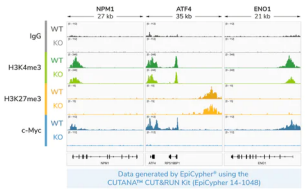
Secondary

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

Predicted band size: 48 kDa

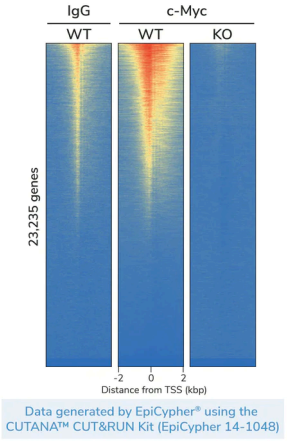
Observed band size: 57 kDa

Exposure time: 30s



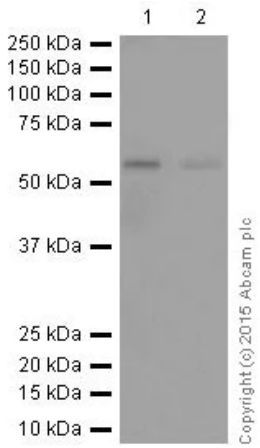
ChIC/CUT&RUN sequencing - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

CUT&RUN profiling with c-Myc antibody reveals the expected genomic enrichment pattern in wild-type (WT) cells, which is substantially reduced in MYC knockout (KO) cells. Representative genome browser tracks show CUT&RUN data generated using the CUTANA™ CUT&RUN Kit (EpiCypher 14-1048) with c-Myc antibody (Abcam ab185656, 0.5 µg). 500,000 HEK293T WT or KO (Abcam ab256500) cells were used per reaction. IgG, H3K4me3, and H3K27me3 antibodies were included as controls to assess non-specific background, active promoters, and repressed chromatin, respectively. Libraries were prepared using the CUTANA™ CUT&RUN Library Prep Kit (EpiCypher 14-1001). Sequencing was performed with paired-end 50 bp reads, and data were processed on CUTANA™ Cloud (cloud.epicypher.com) by alignment to the hg38 genome. Images were generated using Integrative Genomics Viewer (IGV, Broad Institute).



ChIC/CUT&RUN sequencing - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

CUT&RUN profiling with c-Myc antibody demonstrates robust genome-wide enrichment in wild-type (WT) cells, which is markedly diminished in MYC knockout (KO) cells. Heatmaps of genome-wide signal flanking annotated transcription start sites (TSSs, +/- 2 kbp) display CUT&RUN data generated using the CUTANA™ CUT&RUN Kit (EpiCypher 14-1048) with c-Myc antibody (Abcam ab185656, 0.5 µg). 500,000 HEK293T WT or KO (Abcam ab256500) cells were used per reaction. IgG antibody was included as a negative control to assess non-specific background. Libraries were prepared using the CUTANA™ CUT&RUN Library Prep Kit (EpiCypher 14-1001). Sequencing was performed with paired-end 50 bp reads, and data were processed on CUTANA™ Cloud (cloud.epicypher.com) by alignment to the hg38 genome. Heatmaps were generated using deepTools (Ramírez et al., Nucleic Acids Res. 2014; PMID: 24799436). Row-linked data are ranked by intensity relative to c-Myc WT, with red indicating high localized enrichment and blue denoting background. Validated antibodies show genome-wide enrichment above IgG background consistent with c-Myc binding in WT cells and near complete loss of signal in KO cells.



Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656) at 1/2000 dilution

Lane 1:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

Lane 2:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

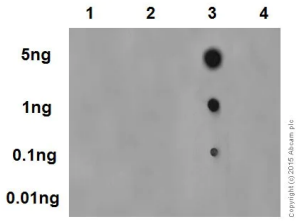
Secondary

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

Predicted band size: 48 kDa

Observed band size: 57 kDa

Exposure time: 3min



Dot Blot - Anti-c-Myc (phospho S62) antibody [EPR17924] (ab185656)

Dot blot analysis of c -Myc (phospho T58) peptide (Lane 1), c-Myc non-phospho peptide (a control peptide for c-Myc phospho T58) (Lane 2), c-Myc (phospho S62) peptide (Lane 3), and c-Myc non-phospho peptide (a control peptide for c-Myc phospho S62) (Lane 4), labeled using ab185656 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary antibody at 1/1000 dilution.
Blocking/Dilution buffer: 5% NFDM/TBST.

Lanes 1, 2 and 4 are control peptides, lane 3 contains the immunogen peptide.

Exposure time=3 minutes.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.