abcam

ab109237

Anti-YY1 antibody [EPR4652] - Nuclear Loading Control

Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) is a rabbit monoclonal antibody detecting YY1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 50 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	EPR4652
Purification technique	Affinity purification Protein A
Concentration	0.502 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/250 - 1/500.** Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

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

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ChIP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/2000 - 1/10000
Notes	-

Species	Rat

Dilution info	1/2000 - 1/10000
Notes	-

Species	Human
Dilution info	1/2000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	**For unpurified use at 1/100 - 1/250.**

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information YY1

Function

Multifunctional transcription factor that exhibits positive and negative control on a large number of cellular and viral genes by binding to sites overlapping the transcription start site (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). Binds to the consensus sequence 5'-CCGCCATNTT-3'; some genes have been shown to contain a longer binding motif allowing enhanced binding; the initial CG dinucleotide can be methylated greatly reducing the binding affinity (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). The effect on transcription regulation is depending upon the context in which it binds and diverse mechanisms of action include direct activation or repression, indirect activation or repression via cofactor recruitment, or activation or repression by disruption of binding sites or conformational DNA changes (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). Its activity is regulated by transcription factors and cytoplasmic proteins that have been shown to abrogate or completely inhibit YY1-mediated activation or repression (PubMed:15329343, PubMed:17721549, PubMed:24326773, PubMed:25787250). For example, it acts as a repressor in absence of adenovirus E1A protein but as an activator in its presence (PubMed:1655281). Acts synergistically with the SMAD1 and SMAD4 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression (PubMed:15329343). Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (PubMed:15329343). May play an important role in development and differentiation. Proposed to recruit the PRC2/EED-EZH2 complex to target genes that are transcriptional repressed (PubMed:11158321). Involved in DNA repair (PubMed:18026119, PubMed:28575647). In vitro, binds to DNA recombination intermediate structures (Holliday junctions). Plays a role in regulating enhancer activation (PubMed:28575647). Recruits the PR-DUB complex to specific gene-regulatory regions (PubMed:20805357). Proposed core component of the chromatin remodeling INO80 complex which is involved in transcriptional

regulation, DNA replication and probably DNA repair; proposed to target the INO80 complex to YY1-responsive elements.

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	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of YY1?
Anti-YY1 [EPR4652] - Nuclear Loading Control (ab109237) is often used as a loading control in Western blot. It specifically detects a band for YY1 (UniProt: P25490) at a molecular weight of 45kDa.

Trusted by the scientific community
Anti-YY1 [EPR4652] - Nuclear Loading Control (ab109237) was first used in a scientific publication in 2011 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists
Anti-YY1 [EPR4652] - Nuclear Loading Control (ab109237) has over 10 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [EPR4652] also available for your convenience: ab109237, Alexa Fluor® 488 - ab199814, Carrier free - ab232573, Carrier free - ab281076

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.

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.

Supplementary info

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

Activity summary	YY1 also known as Yin Yang 1 is a transcription factor that regulates gene expression by binding to specific DNA sequences. It is a protein with a molecular mass of approximately 68 kDa and is ubiquitously expressed in many tissues including liver lung and kidney. Functionally YY1 can both activate and repress transcription making it versatile in regulating gene activity. It interacts with several co-factors and other proteins influencing chromatin structure and gene expression.
Biological function summary	Yin Yang 1 plays an important role in various cellular processes such as cell proliferation differentiation and apoptosis. It is part of a chromatin remodeling complex where it assists in modifying the architecture of chromatin to control gene activity. Due to its ability to bind to diverse DNA motifs YY1 is involved in embryonic development and cellular differentiation. Additionally it interacts with other transcription factors to coordinate the expression of genes critical for cell cycle progression and survival.
Pathways	The Yin Yang 1 transcription factor is integrally involved in several key signaling pathways. It plays a notable role in the Wnt signaling pathway which is vital for controlling cell growth and differentiation. YY1 interacts with proteins such as B-catenin an important player in the Wnt pathway to mediate its transcriptional effects. Furthermore it also functions within the mTOR signaling pathway associating with proteins like mTOR itself to impact cell metabolism and growth.
Associated diseases and disorders	Alterations in the expression or function of YY1 have been implicated in several conditions. Dysregulation of YY1 has strong associations with cancer as its interactions with proteins like MYC can lead to abnormal cell proliferation and tumor development. Additionally its role in neuronal differentiation links it with neurological disorders such as Alzheimer's disease. In these contexts YY1's interaction with other transcription factors and regulatory proteins influences disease progression and severity.

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

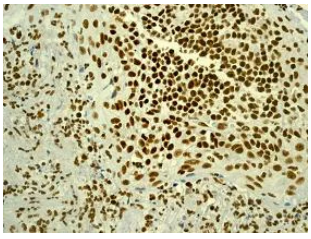
We do not recommend this combination. It is not covered by our product promise.

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.

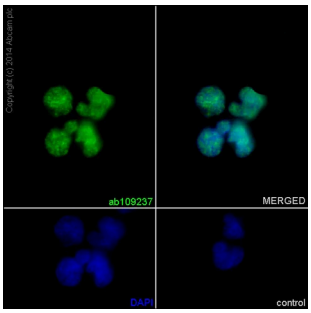
13 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-YY1 antibody

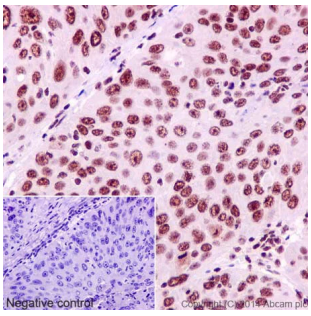
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis human tonsil tissue labelling YY1 with unpurified ab109237 at 1/250.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-YY1 antibody

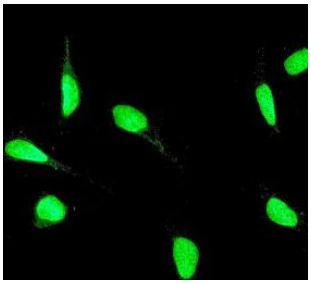
Immunocytochemistry/Immunofluorescence analysis of HUT-78 cells labelling YY1 with purified ab109237 at 1/50. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/50) and secondary antibody, ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-YY1 antibody

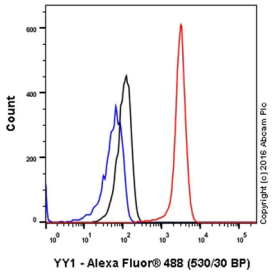
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervix carcinoma tissue labelling YY1 with purified ab109237 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunocytochemistry/ Immunofluorescence - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-YY1 antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling YY1 with unpurified ab109237 at 1/100.

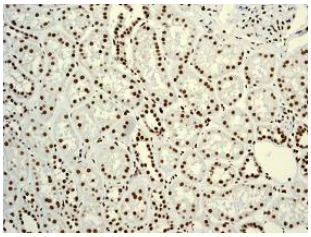


Flow Cytometry (Intracellular) - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Flow Cytometry (Intracellular) staining using rabbit Anti-YY1 antibody

ab109237 staining YY1 in the human cell line HeLa (Human epithelial cell line from cervix adenocarcinoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde, permiabilised with 90% methanol and the sample was incubated with the primary antibody at a dilution of 1/30. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black).

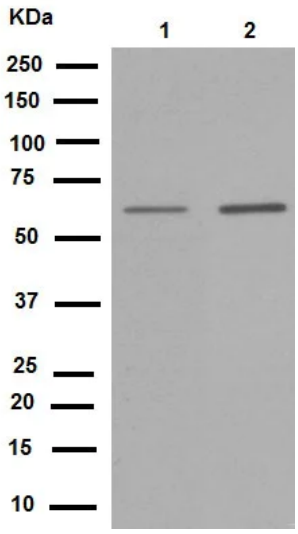
Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

YY1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-YY1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis human kidney tissue labelling YY1 with unpurified ab109237 at 1/250.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

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

All lanes:
Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) at 1/50000 dilution

Lane 1:
Y79 (Human retinoblastoma cell line) cell lysate at 10 µg

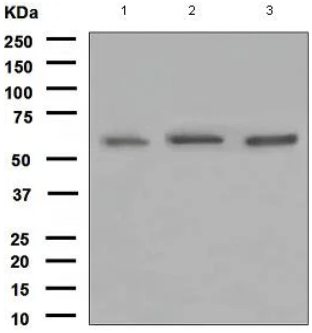
Lane 2:
HuT-78 cell lysate at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 45 kDa

Observed band size: 68 kDa



Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

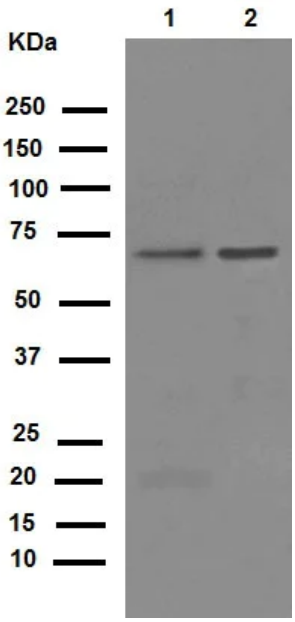
All lanes:
Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) at 1/1000 dilution

Lane 1:
Daudi (Human Burkitt's lymphoma cell line) cell lysate at 10 µg

Lane 2:
Y79 (Human retinoblastoma cell line) cell lysate at 10 µg

Lane 3:
HuT-78 cell lysate at 10 µg

Predicted band size: 45 kDa



Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

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

All lanes:
Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate at 20 µg

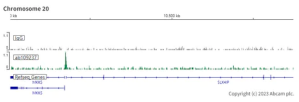
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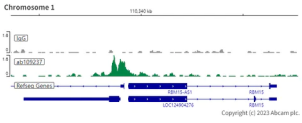
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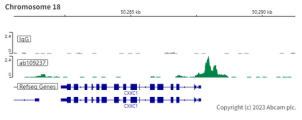
ChIC/CUT&RUN sequencing - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237)

ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5 x 10^5 K-562 (Human chronic myelogenous leukemia lymphoblast) cells and 5 µg of ab109237 [EPR4652]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



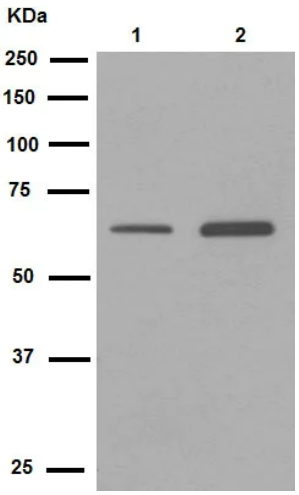
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Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Western blot - Anti-YY1 antibody [EPR4652] - Nuclear Loading Control (ab109237) at 1/2000 dilution

Lane 1:
Mouse heart at 10 µg

Lane 2:
Rat heart at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 45 kDa

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