abcam

ab232573

Anti-YY1 antibody [EPR4652] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4652
Purification technique	Affinity purification Protein A
Concentration	1.029 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ChIP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab232573 is the carrier-free version of ab109237.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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 β-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

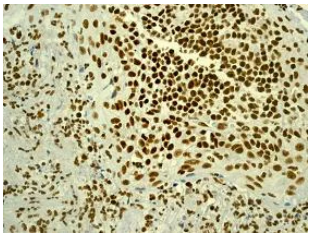
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images

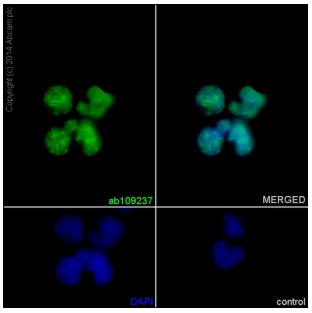


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

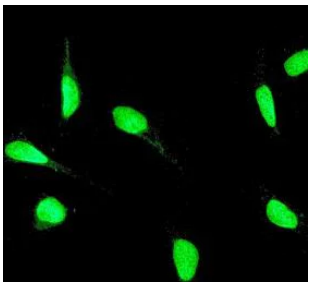


Immunocytochemistry/ Immunofluorescence - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

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).

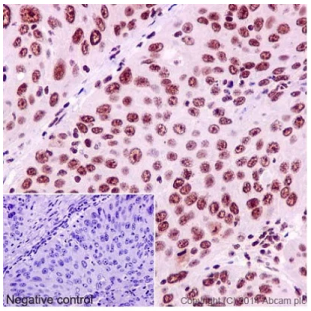
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).



Immunocytochemistry/ Immunofluorescence - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

YY1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-YY1 antibody

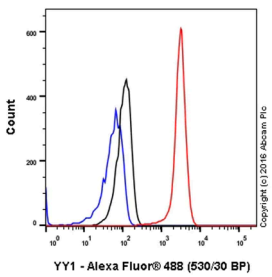
Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling YY1 with unpurified ab109237 at 1/100.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).



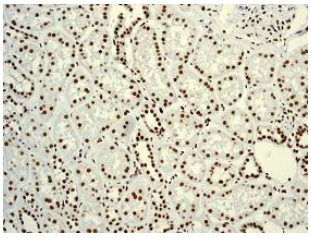
Flow Cytometry (Intracellular) - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

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

ab109237 staining YY1 in the human cell line HeLa (human 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)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).

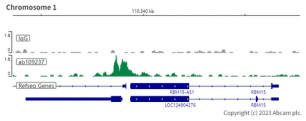


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109237).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



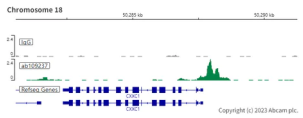
ChIC/CUT&RUN sequencing - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

This data was developed using the same antibody clone in a different buffer formulation (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.



ChIC/CUT&RUN sequencing - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

This data was developed using the same antibody clone in a different buffer formulation (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.



ChIC/CUT&RUN sequencing - Anti-YY1 antibody [EPR4652] - BSA and Azide free (ab232573)

This data was developed using the same antibody clone in a different buffer formulation (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.

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