abcam

ab88082

Anti-PU.1/Spi1 antibody [2G1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 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	2G1
Purity	Tissue culture supernatant
Light chain type	kappa
Purification notes	Purified from TCS.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

ELISA

Tested

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information SPI1

Function	Pioneer transcription factor, which controls hematopoietic cell fate by decompacting stem cell heterochromatin and allowing other transcription factors to enter otherwise inaccessible genomic sites. Once in open chromatin, can directly control gene expression by binding genetic regulatory elements and can also more broadly influence transcription by recruiting transcription factors, such as interferon regulatory factors (IRFs), to otherwise inaccessible genomic regions (PubMed:23658224, PubMed:33951726). Transcriptionally activates genes important for myeloid and lymphoid lineages, such as CSF1R (By similarity). Transcriptional activation from certain promoters, possibly containing low affinity binding sites, is achieved cooperatively with other transcription factors. FCER1A transactivation is achieved in cooperation with GATA1 (By similarity). May be particularly important for the pro- to pre-B cell transition (PubMed:33951726).

Binds (via the ETS domain) onto the purine-rich DNA core sequence 5'-GAGGAA-3', also known as the PU-box (PubMed:33951726). In vitro can bind RNA and interfere with pre-mRNA splicing (By similarity).

Storage

Shipped at conditions	Blue Ice
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

This product was changed from ascites to tissue culture supernatant on 15 May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Supplementary info

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

Activity summary	PU.1 also known as Spi1 is a transcription factor that belongs to the ETS family of transcription factors. It plays a major role in gene regulation and is an important player in hematopoietic cell differentiation. PU.1 has a molecular mass of approximately 31 kDa and is predominantly expressed in hematopoietic cells such as myeloid and B-lymphoid cells. It actively interacts with specific DNA sequences to regulate the expression of target genes.
Biological function summary	PU.1 influences the development and function of various blood cells including macrophages neutrophils and B-cells. It is essential for the regulation of genes involved in immune responses cell proliferation and survival. PU.1 functions as part of a larger transcriptional regulatory complex and often partners with other transcription factors and coactivators to exert its effects. This cooperation allows precise gene expression control in specific cell lineages.
Pathways	Expression of PU.1 is critical in the hematopoietic development pathway and the immune response pathway. It closely interacts with other transcription factors like GATA-1 and C/EBPα forming a network that affects hematopoietic lineage commitment. Within these pathways PU.1 constantly coordinates signals that influence progenitor cell fate and differentiation ensuring a balanced proportion of cell types within the blood.

Associated diseases and disorders	PU.1 has significant implications in leukemia and other hematological malignancies. Dysregulation or mutation of PU.1 can lead to improper hematopoietic cell development and contribute to acute myeloid leukemia (AML) and other blood disorders. Additionally its expression level is closely linked with immune system function associating PU.1 indirectly with autoimmune conditions. In these contexts the interaction with other proteins like AML1 and C/EBPγ can influence disease pathogenesis by modulating gene expression patterns critical for normal hematopoietic and immune function.

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

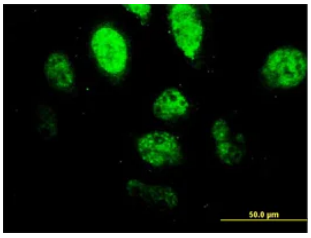
We do not recommend this combination. It is not covered by our product promise.

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.

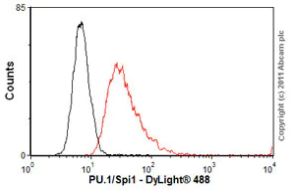
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

PU.1/Spi1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-PU.1/Spi1 antibody

ab88082, at 10 µg/ml, staining PU.1/Spi1 in HeLa cells by Immunofluorescence.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

PU.1/Spi1 Flow Cytometry staining using mouse Anti-PU.1/Spi1 antibody

Overlay histogram showing K562 cells stained with ab88082 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab88082, 2µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
This image was generated using the ascites version of the product.

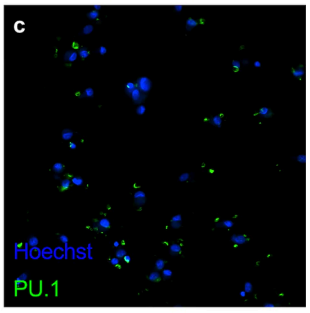
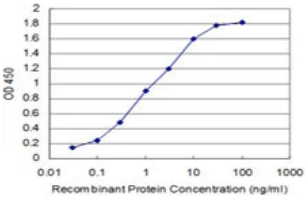


Image courtesy of Sellgren et al. Mol Psychiatry. 2017 Feb; 22(2): 170–177. Fig S3: Doi: 10.1038/mp.2016.220

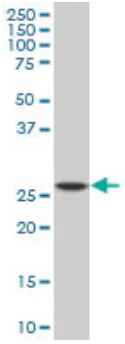
Immunocytochemistry/ Immunofluorescence - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

ab88082 staining PU.1/Spi1 in human induced microglia by ICC/IF (Immunocytochemistry/Immunofluorescence). Cells were fixed with 4% paraformaldehyde for 15 minutes. Samples were incubated with primary antibody (1:200) for 2 hours at room temperature. Hoechst nuclear stain (blue) was used at 1:5000 dilution.
This image was generated using the ascites version of the product.



ELISA - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

Detection limit for recombinant (human) tagged ab88082 is approximately 0.1ng/ml as a capture antibody.
This image was generated using the ascites version of the product.



Western blot - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

This image was generated using the ascites version of the product.
All lanes:
Western blot - Anti-PU.1/Spi1 antibody [2G1] (ab88082) at 5 µg/mL

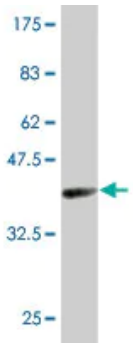
All lanes:
Raw 264.7 cell lysate (Mouse) at 25 µg

Secondary

All lanes:
Goat anti-Mouse IgG (H&L)-HRP at 1/2500 dilution

Predicted band size: 31 kDa

Observed band size: 31 kDa



Western blot - Anti-PU.1/Spi1 antibody [2G1] (ab88082)

Note: Molecular weight of the proprietary tag alone is 26 kDa.
This image was generated using the ascites version of the product.

All lanes:
Western blot - Anti-PU.1/Spi1 antibody [2G1] (ab88082) at 5 µg/mL

All lanes:
tagged human recombinant protein fragment (the immunogen) at 0.2 µg

Secondary

All lanes:
Goat Anti-Mouse IgG (H&L)-HRP Conjugate at 1/5000 dilution

Predicted band size: 31 kDa

Observed band size: 39 kDa

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