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SPI1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1739a

Product Information

Application	WB, FC, E
Primary Accession	P17947
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5C7
Isotype	IgG1
Calculated MW	31083
Description	This gene encodes an ETS-domain transcription factor that activates gene expression during myeloid and B-lymphoid cell development. The nuclear protein binds to a purine-rich sequence known as the PU-box found near the promoters of target genes, and regulates their expression in coordination with other transcription factors and cofactors. The protein can also regulate alternative splicing of target genes. Multiple transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human SPI1 (AA: 124-271) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	6688
Other Names	Transcription factor PU.1, 31 kDa-transforming protein, SPI1
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SPI1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	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).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00237, ECO:0000269|PubMed:33951726}
Tissue Location	In the bone marrow, concentrated in hematopoietic stem cell, lymphoid progenitor, myeloid lineage (granulocyte macrophage progenitors, classical dendritic cells, monocytes) and B-cell clusters Among B-cells, predominantly expressed in pre-B1 cells (PubMed:33951726). Expressed in germinal center B-cells (PubMed:23166356).

References

1.J Biol Chem. 2011 Jan 21;286(3):1675-82.2.Leuk Res. 2010 Dec;34(12):1636-46.

Images

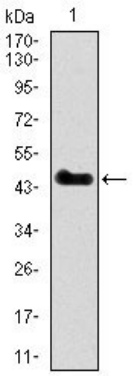


Figure 1: Western blot analysis using SPI1 mAb against human SPI1 recombinant protein. (Expected MW is 46.9 kDa)

Figure 2: Western blot analysis using SPI1 mAb against HEK293 (1) and SPI1 (AA: 124-271)-hIgGFc transfected HEK293 (2) cell lysate.

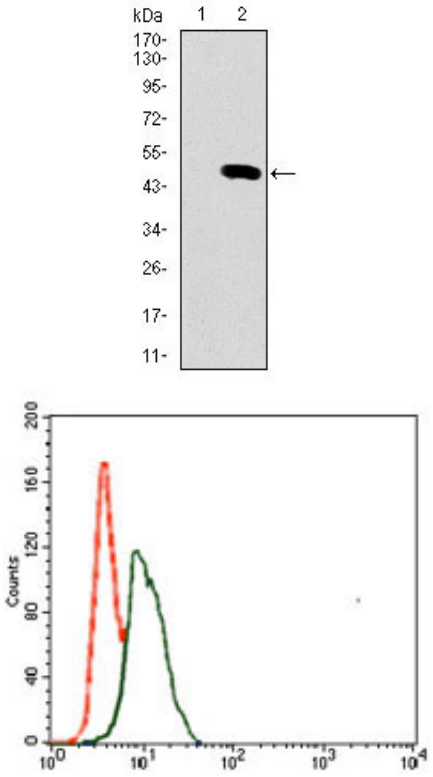


Figure 3: Flow cytometric analysis of HeLa cells using SPI1 mouse mAb (green) and negative control (red).

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