

#81886  
Store at +4C**PU.1 (9G7) Rabbit mAb (PE Conjugate)**
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H M	Endogenous	Rabbit IgG	#P17947	6688

**Product Usage Information****Application**

Flow Cytometry (Fixed/Permeabilized)

**Dilution**

1:50

**Storage**

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.

**Specificity/Sensitivity**

PU.1 (9G7) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total PU.1 protein. This antibody does not cross react with other Ets family proteins.

**Species predicted to react based on 100% sequence homology**

Pig

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PU.1 protein.

**Description**

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated PU.1 (9G7) Rabbit mAb #2258.

**Background**

PU.1 is a member of the Ets family of transcription factors and activates target genes through the purine-rich PU-box (1). PU.1 plays a pivotal role in the differentiation of myeloid cells and lymphocytes and is expressed in several hematopoietic cells, including B lymphocytes, macrophages, neutrophils, mast cells, early erythroid cells, and megakaryocytes (1,2). The concentration of PU.1 is critical for both the determination of hematopoietic cell lineage and the regulation of differentiation versus stem cell proliferation (3,4). In addition, PU.1 activity is influenced by phosphorylation and interactions with other hematopoietic transcription factors. Phosphorylation of PU.1 at Ser146 by CK2 promotes binding to IRF-4 and synergistic activation through the immunoglobulin  $\kappa$  3' enhancer (5). Treatment of pro-B cells with IL-3 leads to phosphorylation of PU.1 at Ser140, resulting in increased PU.1 activity and activation of the anti-apoptotic gene MCL-1 (6). GATA1 binding blocks PU.1 activity during erythroid cell development (7). Overexpression of PU.1 resulting from proviral insertion during Friend virus infection can induce erythroleukemia, while reduced expression has been associated with acute myeloid leukemia (8).

**Background References**

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- Klemsz, M.J. et al. (1990) *Cell* 61, 113-24.
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- DeKoter, R.P. and Singh, H. (2000) *Science* 288, 1439-41.
- Pongubala, J.M. et al. (1993) *Science* 259, 1622-5.
- Wang, J.M. et al. (2003) *Mol Cell Biol* 23, 1896-909.
- Zhang, P. et al. (1999) *Proc Natl Acad Sci U S A* 96, 8705-10.
- Moreau-Gachelin, F. et al. (1988) *Nature* 331, 277-80.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Applications Key****FC-FP:** Flow Cytometry (Fixed/Permeabilized)**Cross-Reactivity Key****H:** Human **M:** Mouse**Trademarks and Patents**

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