

#2258 Store at -20C

PU.1 (9G7) Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP, IHC-P, IF-F, IF-IC, FC-FP, C&R	H M	Endogenous	42	Rabbit IgG	#P17947	6688

Product Usage Information

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:100
Immunofluorescence (Frozen)	1:200 - 1:400
Immunofluorescence (Immunocytochemistry)	1:200 - 1:400
Flow Cytometry (Fixed/Permeabilized)	1:200
CUT&RUN	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #45150.

Specificity / Sensitivity

This antibody detects endogenous levels of total PU.1 protein. The antibody does not cross react with other Ets family members.

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.

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 IRF4 and synergistic activation through the immunoglobulin κ 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

1. Lloberas, J. et al. (1999) *Immunol Today* 20, 184-9.
2. Klemsz, M.J. et al. (1990) *Cell* 61, 113-24.
3. Dahl, R. and Simon, M.C. (2003) *Blood Cells Mol Dis* 31, 229-33.
4. DeKoter, R.P. and Singh, H. (2000) *Science* 288, 1439-41.
5. Pongubala, J.M. et al. (1993) *Science* 259, 1622-5.
6. Wang, J.M. et al. (2003) *Mol Cell Biol* 23, 1896-909.
7. Zhang, P. et al. (1999) *Proc Natl Acad Sci U S A* 96, 8705-10.
8. 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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation
IHC-P: Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)
IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)
C&R: CUT&RUN

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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