Store at 4°C

#2216

# PU.1 (9G7) Rabbit mAb (Alexa Fluor® 488 Conjugate)

☑ 100 µl
(50 tests)

New more concentrated formulation

Cell Signaling TECHNOLOGY®

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**Entrez-Gene ID** #6688
**Swiss-Prot Acc.** #P17947

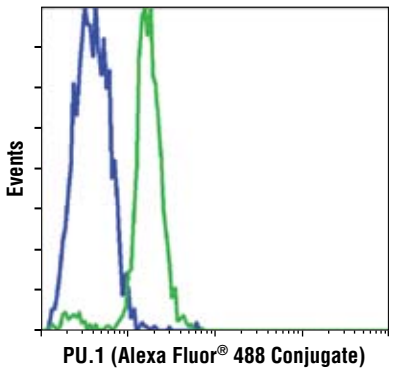
| Applications | Species Cross-Reactivity* | Isotype |
|---|---|---|
| F<br>Endogenous | H, M | Rabbit IgG |

**Description:** This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis of human cells. The unconjugated antibody #2258 reacts with human and mouse PU.1 protein. CST expects that PU.1 (9G7) Rabbit mAb (Alexa Fluor® 488 Conjugate) will also recognize PU.1 in these species.

**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).

**Specificity/Sensitivity:** PU.1 (9G7) Rabbit mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of total PU.1 protein. This antibody does not cross react with other Ets family members.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PU.1 protein. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.




*Flow cytometric analysis of MCF-7 cells (blue) or THP-1 cells (green), using PU.1 (9G7) Rabbit mAb (Alexa Fluor® 488 Conjugate).*

**Background References:**

(1) Lloberas, J. et al. (1999) *Immunol. Today* 20, 184–189.
(2) Klemsz, M.J. et al. (1990) *Cell* 61, 113–124.
(3) Dahl, R. and Simon, M.C. (2003) *Blood Cells Mol. Dis.* 31, 229–233.
(4) DeKoter, R.P. and Singh, H. (2000) *Science* 288, 1439–1441.
(5) Pongubala, J.M. et al. (1993) *Science* 259, 1622–1625.
(6) Wang, J.M. et al. (2003) *Mol. Cell Biol.* 23, 1896–1909.
(7) Zhang, P. et al. (1999) *Proc. Natl. Acad. Sci. USA* 96, 8705–8710.
(8) Moreau-Gachelin, F. et al. (1998) *Nature* 331, 277–280.

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

***Species cross-reactivity other than human is determined by western blot using the unconjugated antibody.**

**Recommended Antibody Dilutions:**

| | |
|---|---|
| Flow Cytometry | 1:50 |

**For application specific protocols please see the web page for this product at www.cellsignal.com.**

**Please visit www.cellsignal.com for a complete listing of recommended companion products.**





**Applications Key:** **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

**Species Cross-Reactivity Key:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected