

1P-765-T025

Monoclonal Antibody to Perforin Phycoerythrin (PE) conjugated (25 tests)

Clone:	dG9
Isotype:	Mouse IgG2b
Specificity:	The mouse monoclonal antibody dG9 (also known as deltaG9) recognizes perforin, a 70 kDa protein expressed in cytoplasmic granules of cytotoxic T cells and NK cells.
Regulatory Status:	RUO
Immunogen:	purified granules from human YT lymphoma cell line
Species Reactivity:	Human, Bovine
Negative Species:	Mouse
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 10 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.25 ml) is sufficient for 25 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	Perforin is a 70 kDa cytolytic protein with structural and functional similarities to complement component 9 (C9). It is stored in cytoplasmic granules of cytotoxic T cells and NK cells and after its release it forms transmembrane pores in the target cells to kill it. As perforin is a key effector molecule for cell-mediated cytotoxicity, defects of its gene can cause severe disorders.

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Antibodies

References:

- *Hameed A, Olsen KJ, Cheng L, Fox WM, Hruban RH, Podack ER: Immunohistochemical identification of cytotoxic lymphocytes using human perforin monoclonal antibody. *Am J Pathol.* 1992 May;140(5):1025-30.
- *Hersperger AR, Makedonas G, Betts MR: Flow cytometric detection of perforin upregulation in human CD8 T cells. *Cytometry A.* 2008 Nov;73(11):1050-7.
- *Vargas-Inchaustegui DA, Demberg T, Robert-Guroff M: A CD8⁺ subpopulation of macaque circulatory natural killer cells can mediate both antibody-dependent and antibody-independent cytotoxic activities. *Immunology.* 2011 Nov;134(3):326-40.
- *Takeuchi M, Inoue T, Otani T, Yamasaki F, Nakamura S, Kibata M: Cell-in-cell structures formed between human cancer cell lines and the cytotoxic regulatory T-cell line HOZOT. *J Mol Cell Biol.* 2010 Jun;2(3):139-51.
- *Qiu Y, Chen J, Liao H, Zhang Y, Wang H, Li S, Luo Y, Fang D, Li G, Zhou B, Shen L, Chen CY, Huang D, Cai J, Cao K, Jiang L, Zeng G, Chen ZW: Tim-3-expressing CD4⁺ and CD8⁺ T cells in human tuberculosis (TB) exhibit polarized effector memory phenotypes and stronger anti-TB effector functions. *PLoS Pathog.* 2012;8(11):e1002984.

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