

**Alexa Fluor® 647 anti-GATA3**

**Catalog # / Size:** 3869050 / 100 tests  
3869045 / 25 tests

**Clone:** 16E10A23

**Isotype:** Mouse IgG2b, κ

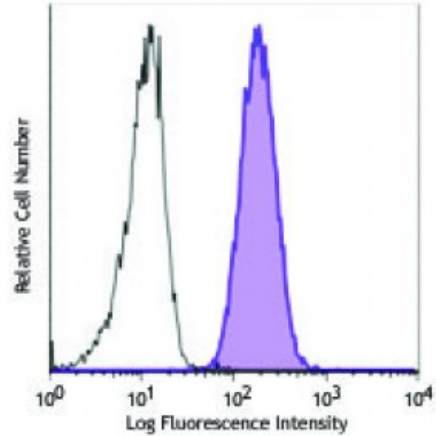
**Immunogen:** Partial human GATA3 recombinant protein (1-258 aa).

**Reactivity:** Human, Mouse

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Concentration:** Lot-specific



Human T leukemia cell line Jurkat (filled histogram) or Burkitt's lymphoma cell line Ramos (open histogram) were treated with Nuclear Factor Fixation and Permeabilization Buffer Set (Cat. No. 422601), and then stained with anti-human GATA3 (clone 16E

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by intracellular immunofluorescent staining using our nuclear factor staining protocol. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.

**Description:** GATA3 functions as a major regulator of T helper 2 (Th2) cell differentiation in immune cells. GATA3 expression is upregulated through IL-4 receptor signaling or the Notch-mediated pathway, which results in production of IL-4, IL-5, and IL-13 cytokines, responsible for preferential differentiation of Th2-cells. GATA3 has been shown to regulate early developmental processes of T cells, such as T cell commitment, positive selection, and post-commitment CD4<sup>+</sup> T cell survival. In the mammary gland, GATA3 plays an important role in differentiation and commitment of luminal epithelial cells. In a mouse model, exogenous expression of GATA3 in undifferentiated breast carcinoma cells induces differentiation and suppresses spreading of the tumor cells, suggesting that GATA3 is involved in preventing malignancy of breast cancer. GATA3 has been reported to be essential in the development of a variety of normal tissues. Defect in GATA3 results in hypoparathyroidism, sensorineural deafness, and renal dysplasia (HDR syndrome).

**Antigen References:**

1. Yagi R, *et al.* 2011. *Int. Immunol.* 23:415.
2. Chou J, *et al.* 2010. *J. Cell Physiol.* 222:42.
3. Ho IC, *et al.* 2009. *Nat. Rev. Immunol.* 9:125.

