## **Product Data Sheet**

### APC/Fire™ 750 anti-human IL-22

**Catalog #** / 2433570 / 100 tests

**Size:** 2433565 / 25 tests

**Clone:** 2G12A41

**Isotype:** Mouse IgG2a, κ

Immunogen: Full length recombinant protein

expressed in E. Coli

Reactivity: Human

**Preparation:** The antibody was purified by affinity

chromatography and conjugated with

APC/Fire™ 750 under optimal

conditions.

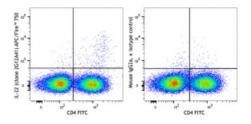
**Formulation:** Phosphate-buffered solution, pH 7.2,

containing 0.09% sodium azide and

0.2% (w/v) BSA (origin USA).

Workshop Number: II T7

Concentration: Lot-specific



PMA and ionomycin (5 hours in the presence of Brefeldin A) stimulated human peripheral blood mononuclear cells were stained with CD4 FITC, fixed, permeabilized, and stained with APC/Fire™ 750 mouse IgG2a, κ isotype control (right), or APC/Fire™ 750 IL-22 (clone 2G12A41, left).

## **Applications:**

**Applications:** Intracellular Staining for Flow

Cytometry

Recommended Usage:

Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5

μl per 100 μl of whole blood.

\* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum

emission of 787 nm.

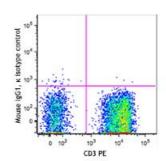
Application Notes:

Additional reported applications (for the relevant formats of this clone) include: activation of LFA-1 and MAC-

 $1^{1,2}$ .

Application References:

1. Hoyer J, et al. 2008. Am. J. Clin. Pathol. 129:316.



#### **Description:**

IL-22 is a cytokine that is structurally related to IL-10. Originally identified as a murine gene induced by IL-9 in T and mast cells, IL-22 was initially designated ILTIF, also known as the IL-10-related T cell-derived inducible factor. IL-22 belongs to a family of cytokines with limited homology specifically to IL-10, IL-19, IL-20, IL-24, IL-26, the IFN-λs, IL-28A, IL-28B, and IL-29. Human IL-22 shares 79% amino acid identity with murine IL-22 and 25% identity with human IL-10. IL-22 biological activity is initiated by binding to a cell surface complex composed of IL-22R1 and IL-10R2 receptor chains. Its activity is further regulated through interactions with the soluble binding protein, IL-22BP, which shares sequence similarity with an extracellular region of IL-22R1 (sIL-22R1). Both chains of the IL-22R complex belong to the class II cytokine receptor family. Two types of IL-22 binding receptors have been discovered: a membrane-bound receptor and a soluble receptor that are encoded by different genes. IL-22 is produced by Th17 cells and Th22 cells. The use of Iscove's Modified Dulbecco's Medium (IMDM) will result in better in vitro Th17 polarization. It plays a critical role in mucosal immunity in addition to the deregulated inflammation observed in autoimmune diseases.

# Antigen References:

- 1. Nagalakshmi ML, et al. 2004. Int. Immunopharmacol. 5:679.
- 2. Kebir H,, et al. 2007. Nat. Med. 13:1173.
- 3. Gu Y, et al. 2008. Eur. J. Immunol. 38:1807.
- 4. Pene Y, et al. 2008. J. Immunol. 180:7423.
- 5. Dumotier L, et al. 2000. J. Immune 164:1814.
- 6. Xie MH, et al. 2000. J. Biol. Chem. 40:31335.
- 7. Kotenko SV, et al. 2001. J. Immunol. 166:7096.
- 8. Chung Y, et al. 2006. Cell Res. 11:902.
- 9. Trifari S, et al. 2009. Nat. Immunol. 10:864.