

**PE anti-human 4-1BB Ligand (CD137L)**

**Catalog # / Size:** 2157515 / 25 tests  
2157520 / 100 tests

**Clone:** 5F4

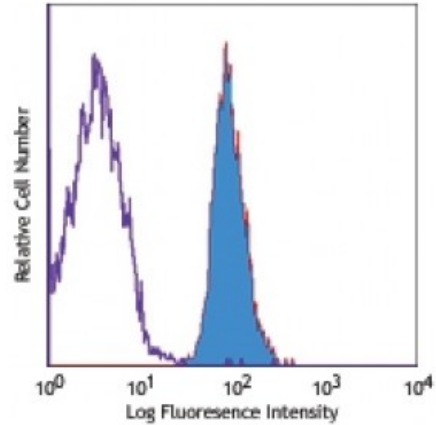
**Isotype:** Mouse IgG1,  $\kappa$

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

**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 lymphoma cell line HUT-78 stained with 5F4 PE

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** For most successful immunofluorescent staining results, it may be important to maximize signal over background by using a relatively bright fluorochrome-antibody conjugate (Cat. No. 311504) or by using a high sensitivity, three-layer staining technique (e.g., including a biotinylated anti-mouse IgG second step (Cat. No. 405303), followed by SA<sub>v</sub>-PE (Cat. No. 405204)).

**Application References:** 1. Gullo C, *et al.* 2010. *PLoS One*. 5:e10845. (FC) [PubMed](#)

**Description:** 4-1BB ligand, also known as CDw137L, is a 97 kD member of the TNF superfamily mainly expressed on APCs, activated B and T cells. It has been reported to be important in T cell proliferation and cytokine production through interaction with 4-1BB receptor. 4-1BB ligand appears to be able to act as a costimulatory molecule without the engagement of other costimulatory molecules such as CD28.

**Antigen References:**

1. Akiba H, *et al.* 2000. *J. Exp. Med.* 191:375.
2. Pollak KE, *et al.* 1995. *Eur. J. Immunol.* 25:488.
3. DeBenedette MA, *et al.* 1997. *J. Immunol.* 158:551.
4. Goodwin RG, *et al.*