SONY

Product Data Sheet

PE/Cyanine7 anti-human CD29

Catalog # / Size: 2115130 / 100 tests
2115125 / 25 tests

Clone: TS2/16

Isotype: Mouse IgG1, κ

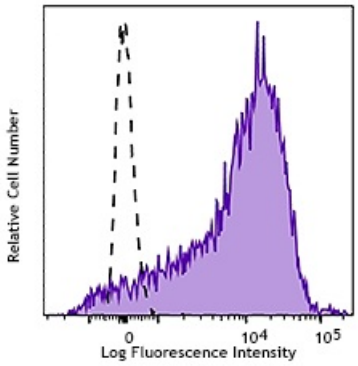
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with PE/Cy7 under optimal conditions.

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

Workshop Number: V A-S202

Concentration: Lot-specific



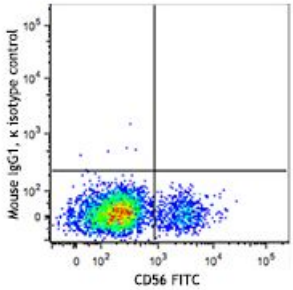
Human peripheral blood lymphocytes stained with CD29 (clone TS2/16) PE/Cy7 (filled histogram) or mouse IgG1, κ PE/Cy7 isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: immunoprecipitation3, immunohistochemical staining of acetone-fixed frozen tissue sections[3,5], and activation of integrin β_1[4,7,8]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 303010). Clone TS2/16 recognizes epitope A2[10].



Formalin-fixed paraffin-embedded human breast cancer tissue slices were deparaffinized and rehydrated. Antigen retrieval was done with Tris-Buffered Saline 1X (1.0 M, pH 7.4) at 95°C for 40 minutes, washed with PBS/0.05% Tween 20 twice for five minutes, permeabilized with 0.5% Triton X-100 for ten minutes, and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the slices were stained with 5 µg/mL anti-EGFR (clone A19002A) Alexa Fluor® 647 (red) at 4°C overnight. Nuclei were counterstained with DAPI (green). The image was captured with a 10X objective.

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Application References:

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
2. Gutierrez-Lopez M, *et al.* 2003. *J. Biol. Chem.* 278:208.
3. Hemler ME, *et al.* 1984. *J. Immunol.* 132:3011. (IHC, IP)
4. Sanchez-Aparicio P, *et al.* 1994. *J. Cell Biol.* 126:271. (Activ)
5. Frank NY, *et al.* 2005. *Cancer Res.* 65:4320. (IHC)
6. Murga M, *et al.* 2005. *Blood* 105:1992. (FC) PubMed
7. Porter JC and Hogg N. 1997. *J. Cell Biol.* 138:1437. (Activ)
8. Conway RE, *et al.* 2006. *Mol. Cell. Biol.* 26:5310. (Activ)
9. Wesseling J, *et al.* 1995. *J. Cell. Biol.* 129:255. (Dog Reactivity)
10. Rubio G, *et al.* 2002. *Cancer Immunol. Immunother.* 51:130.
11. Dong A, *et al.* 2015. *J Biol Chem.* 290:8016. PubMed
12. Paebst F, *et al.* 2014. *Cytometry A.* 85(8):678-87. (Horse reactivity)

Description: CD29 is a 130 kD single chain type I glycoprotein also known as integrin β_1, VLA-β chain, or gpIIa. It is broadly expressed on a majority of hematopoietic and non-hematopoietic cells, including leukocytes (although at low level on granulocytes), platelets, fibroblasts, endothelial cells, epithelial cells, and mast cells. CD29 is a member of the integrin family. It is non-covalently associated with integrin α1-α6 chains to form VLA-1 to VLA-6 molecules, respectively. Integrins, which include CD29, bind to several cell surface (e.g. VCAM-1, MadCAM-1) and extracellular matrix molecules. CD29 acts as a fibronectin receptor and is involved in a variety of cell-cell and cell-matrix interactions.

Antigen References:

1. Hemler M. 1990. *Annu. Rev. Immunol.* 8:365.
2. Hynes R. 1992. *Cell* 69:11.

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