Anti-PLXDC2 (4G3) rabbit mAb APC Conjugate

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: APC

Cross Reactivity: Predicted to work with mouse, rat and other homologues.

Formulation: PBS (pH 7.4), 0.1% BSA, 0.02% NaN3

Preparation: Protein A+G

Reactivity: Human

Recommended Usage: Flow cytometry, 1:100-1:1000

Immunogen: HEK293 cells expressing human PLXDC2

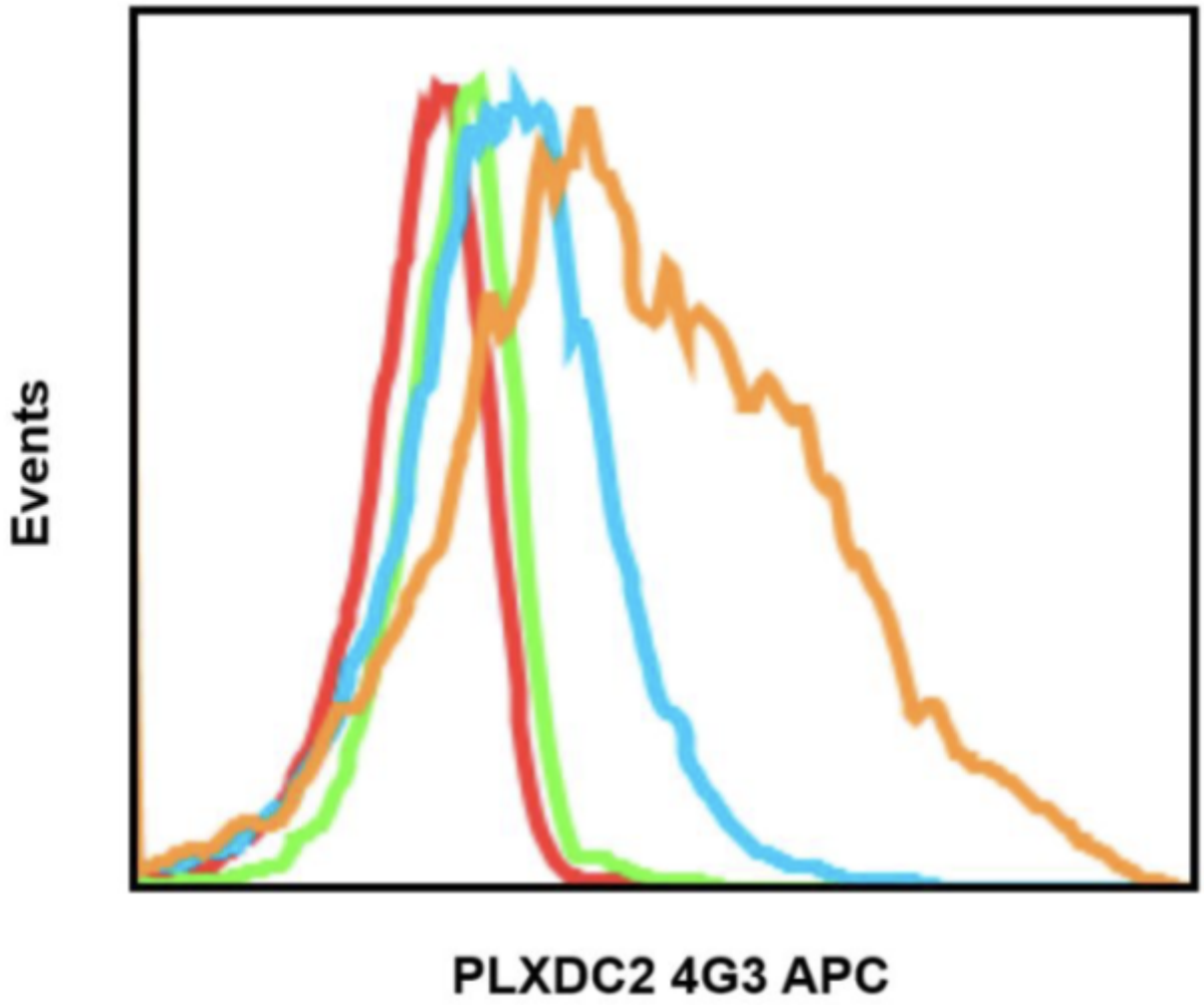
Description: Plexin domain containing protein 2 (PLXDC2), a cell surface transmembrane protein, is expressed in many tissues including haemotopoeitc stem cells, neural stem cells, pluripotent stem cells, and tumor cells. PLXDC2 may play an important role in neuronal growth, stem cell development, angiogenesis, and cancer cell growth. Recently PLXDC2 was reported a good cell surface marker as human haemotopoetic stem cells (1). PLXDC2 has been reported as a receptor for pigment epithelium derived factor (PEDF) (2)or as an activating ligand for adhesion G-protein coupled receptor D1 (Adgrd1) (3). Also PLXDC2 was thought as a novel interaction partner and an entry receptor for rhesus monkey rhadinovirus (RRV) 4). The gene expression level of PLXDC2 was elevated in the peripheral blood of stroke patients (5) or in mouse bone marrow-derived macrophages in response to Helicobacter pylori (6). The protease BACE1 (beta-Site APP Cleaving Enzyme), a major drug target in Alzheimer's disease, cleaves the amyloid precursor protein (APP) as well as PLXDC2 as one of several other substrates (7).

References:

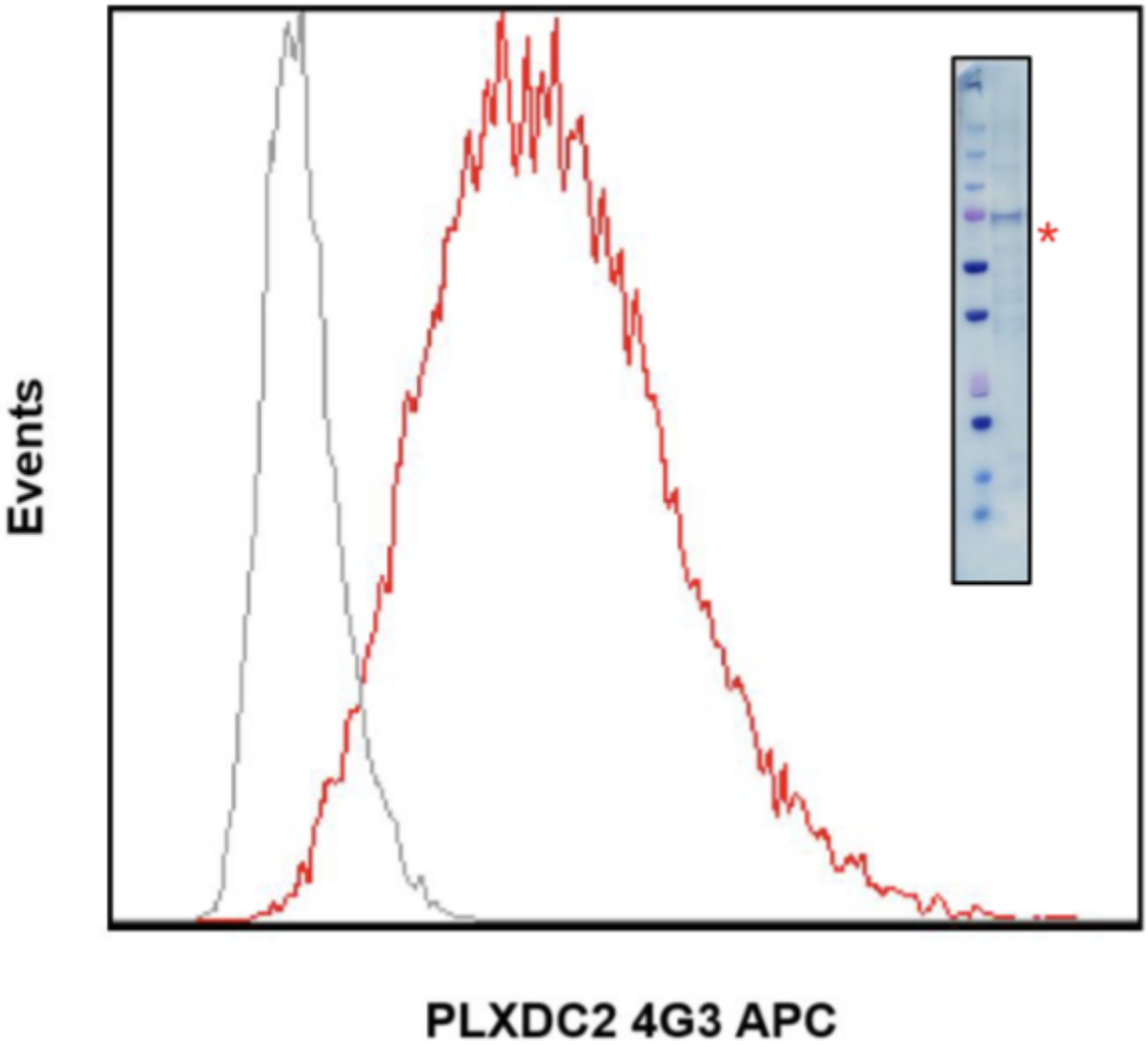
1. Tanaka Y et al 2021 bioRXiv Sep 27: 2021.09.27.461900v1.doi: 10.1101/2021.09.27.461900.
2. Cheng G et al. 2014 Elife. 3:e05401
3. Bianchi E et al 2021 Nat Commun. 2021 12(1):1251.
4. Großkopf AK et al. 2021 PLoS Pathog. 17(3):e1008979
5. O'Connell GC et al. 2017 Genom Data. Sep 14:47-52.
6. Tubau-Juni N, et al 2020 Sci. Rep. 10(1):11506.
7. Dislich B et al. 2015 Cell Proteomics. 10:2550-63

References using this antibody

1. Shimizu, H. et al. (2018) Improving the quality of a recombinant rabbit monoclonal antibody against PLXDC2 by optimizing transient expression conditions and purification method. Protein Expr Purif 146, 27–33.
2. Yamamoto N. et al. (2020) Expression Pattern of Plexin Domain Containing 2 in Human Hepatocellular Carcinoma. Monoclon Antib Immunodiagn Immunother. 39(2):57-60.
3. Hamada, Y. et al. (2021) Plexin domain containing protein 2 is more expressed within the invasive area of human colorectal cancer tissues. Human Cell 34(5) 1580-1583.
4. Tanaka Y. et al.(2021) Prospective isolation of mouse and human hematopoietic stem cells using Plexin domain containing 2. BioRXiv Sep 27: 2021.09.27.461900v1.doi: 10.1101/2021.09.27.461900.



Flow cytometry analysis of HEK293 cells transfected with PLXDC2 (orange) or untransfected (blue) using anti-PLXDC2 (4G3) rabbit mAb APC Conjugate at 1 ug/mL Cat. #2532 (blue). The red and green lines show unstained HEK293 cells and PLXDC2-transfected HEK293 cells, respectively.



Flow cytometry analysis of human monocyte THP-1 cells (gray) pretreated with human FcR-Blocking reagent (Immunostep) using anti-PLXDC2 (4G3) rabbit mAb APC Conjugate at 1ug/mL Cat. #2534 (red). The inset shows the expression of PLXDC2 in THP-1 cells detected by western blotting using an anti-PLXDC2-4G3 rabbit antibody Cat. #2531.