CD133 (Prominin-1) Monoclonal Antibody (TMP4), PE, eBioscience™

Product Details	
Size	25 Tests
Species Reactivity	Human
Published Species	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	TMP4
Conjugate	PE
Excitation/Emission Max	565/576 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_1582258

Applications	Tested Dilution	Publications
Immunohistochemistry (Paraffin) (IHC (P))	-	1 Publication
Immunocytochemistry (ICC/IF)	-	2 Publications
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	14 Publications
Miscellaneous PubMed (Misc)	-	1 Publication

Product Specific Information

Description: The TMP4 monoclonal antibody reacts with human CD133 (Prominin-1), a 120 kDa member of the pentaspan family of proteins, which also includes Prominin-2. Their expression is found within plasma membrane protrusions such as epithelial microvilli. CD133 can exist in a number of alternatively spliced isoforms, and the protein has several N-linked glycosylation sites: the occurrence of both may be tissue-dependent. Human CD133 was first identified as an epitope expressed on CD34+ hematopoietic progenitors. Although the ligand and function of CD133 remain unknown, it has since proven to be very useful as a marker for both stem cells and cancer stem cells. In addition to its expression on hematopoietic precursors, CD133 has been used to identify tumorigenic colon cancer stem cells, brain cancer stem cells, prostate cancer stem cells, in addition to others.

The binding of the TMP4 antibody does not block the binding of another anti-human CD133 antibody, EMK08 (Product # 12-1339) indicating that they recognize distinct epitopes.

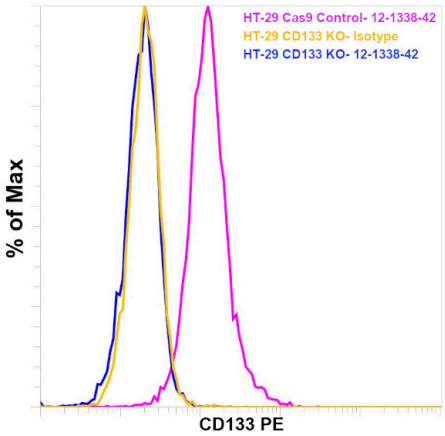
Applications Reported: This TMP4 antibody has been reported for use in flow cytometric analysis.

Applications Tested: This TMP4 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.25 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.

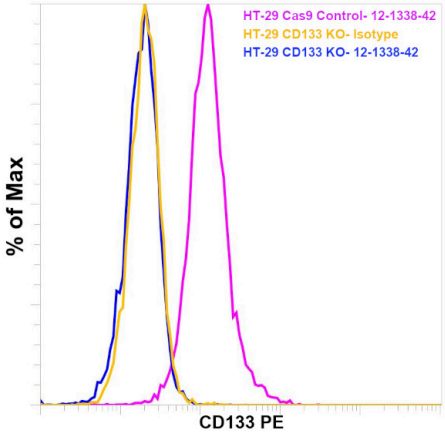
Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

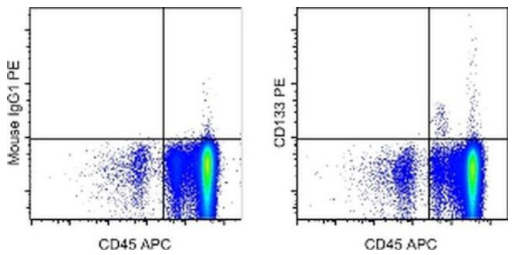
Product Images For CD133 (Prominin-1) Monoclonal Antibody (TMP4), PE, eBioscience™



CD133 (Prominin-1) Antibody (12-1338-41)
Antibody clone (TMP4) specificity was demonstrated by CRISPR-Cas9 mediated knockout of target protein. Loss of signal was observed for target protein in CD133 KO cells (blue histogram) compared to the control Cas9 cells (pink histogram) using CD133 (Prominin-1) Monoclonal Antibody (TMP4), PE, eBioscience™ (Product # 12-1338-42). Yellow histogram represents staining with the isotype control. {KO}



CD133 (Prominin-1) Antibody (12-1338-41) in Flow
Knockout of CD133 was achieved by CRISPR-Cas9 genome editing using LentiArray™ Lentiviral sgRNA (Product # A32042, Assay ID CRISPR924819_LV) and LentiArray Cas9 Lentivirus (Product # A32064). Flow cytometry analysis of CD133 was performed by staining HT-29 CD133 Knock out cells with 0.25 µg Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE, eBioscience™ (Product # 12-4714-82, yellow histogram) or 0.25 µg CD133 (Prominin-1) Monoclonal Antibody (TMP4), PE, eBioscience™ (Product # 12-1338-42, blue histogram). HT-29 Cas9 control cells were also stained with 0.25 µg CD133 (Prominin-1) Monoclonal Antibody (TMP4), PE, eBioscience™ (Product # 12-1338-42, pink histogram). Loss of signal was observed in the CD133 KO cells stained with anti-CD133 antibody clone TMP4 but not in the control Cas9 cells. Fixable Viability Dye eFluor 780 (Product # 65-0865-18) was used for staining and selecting viable cells for analysis.



CD133 (Prominin-1) Antibody (12-1338-41) in Flow
Staining of normal human peripheral blood mononuclear cells with Anti-Human CD45 APC (Product # 17-9459-42) and Mouse IgG1 K Isotype Control PE (Product # 12-4714-81) (left) or Anti-Human CD133 PE (right). Total viable cells were used for analysis.

View more figures on thermofisher.cn

18 References

Immunohistochemistry (Paraffin) (1)

Cells

Human Adult Renal Progenitor Cells Prevent Cisplatin-Nephrotoxicity by Inducing CYP1B1 Overexpression and miR-27b-3p Down-Regulation through Extracellular Vesicles.

"12-1338-42 was used in Immunohistochemistry (Paraffin) to investigate the molecular mechanisms underlying the protective effect of tARPC on renal epithelium during cisplatin nephrotoxicity."

Authors: Franzin R,Stasi A,De Palma G,Picerno A,Curci C,Sebastiano S,Campioni M,Cicirelli A,Rizzo A,Di Lorenzo VF, Pontrelli P,Pertosa GB,Castellano G,Gesualdo L,Sallustio F

Year 2023

Species Human

Immunocytochemistry (2)

PloS one

Modified Leukocyte Filter Removes Tumor Cells from the Salvaged Blood.

"12-1338 was used in Immunocytochemistry to evaluate the application of modified leukocyte depletion filter for once-surgery, and suggest the potential clinical application for blood cancers treatment."

Authors: Mei K,Du L,Yan M,Zhang Z,Zhang F,Gong L,Sun K,Zhang J,Tang Y,Jiang C,Liu J

Year 2016

Species Human

PloS one

Comparative evaluation of differentiation potential of menstrual blood-versus bone marrow-derived stem cells into hepatocyte-like cells.

Authors: Khanjani S,Khanmohammadi M,Zarnani AH,Akhondi MM,Ahani A,Ghaempanah Z,Naderi MM,Eghtesad S, Kazemnejad S

Year 2014

Species Human

Flow Cytometry (14)

Frontiers in oncology

Non-canonical Wnt/Ca2+ signaling is essential to promote self-renewal and proliferation in colon cancer stem cells.

"12-1338-42 was used in Flow Cytometry to indicate that both types of ligands activate the Wnt/Ca2+ signaling axis to induce/maintain the self-renewal efficiency of CSCs, demonstrating to be essential for the functions of CSC in colon cancer."

Authors: Sarabia-Sánchez MA,Moreno-Londoño AP,Castañeda-Patlán MC,Alvarado-Ortiz E,Martínez-Morales JC, Robles-Flores M

Year 2023

Species Human

View more Flow references on thermofisher.cn

More applications with references on thermofisher.cn

Misc (1)