abcam

ab106172

PE Anti-Flt3 / CD135 antibody [BV10A4]

Anti-Flt3 / CD135 antibody [BV10A4] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [BV10A4] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing FLT3 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P36888
Clone number	BV10A4
Purification technique	Size-exclusion chromatography
Purification notes	>95% by SDS-PAGE

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	20 µL for 10^6 Cells
Notes	Use 20 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information FLT3

Function	Tyrosine-protein kinase that acts as a cell-surface receptor for the cytokine FLT3LG and regulates differentiation, proliferation and survival of hematopoietic progenitor cells and of dendritic cells. Promotes phosphorylation of SHC1 and AKT1, and activation of the downstream effector MTOR. Promotes activation of RAS signaling and phosphorylation of downstream kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation of FES, FER, PTPN6/SHP, PTPN11/SHP-2, PLCG1, and STAT5A and/or STAT5B. Activation of wild-type FLT3 causes only marginal activation of STAT5A or STAT5B. Mutations that cause constitutive kinase activity promote cell proliferation and resistance to apoptosis via the activation of multiple signaling pathways.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

Clone BV10A4 is also reffered to as BV10.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Flt3 also known as CD135 or FLT3 tyrosine kinase is a receptor tyrosine kinase that belongs to the class III receptor tyrosine kinase family. It has a molecular weight of approximately 160 kDa. This protein plays an important role in the development of hematopoietic stem and progenitor cells. Flt3 is expressed mainly in early progenitor cells within the bone marrow. Additionally it is present in some populations of mature cells in the peripheral blood and lymphoid organs.
Biological function summary	Flt3 functions as a receptor that is activated by binding to its ligand FLT3 ligand (FLT3L). This interaction stimulates the associated tyrosine kinase activity leading to auto-phosphorylation of Flt3 and subsequent downstream signaling. Flt3 does not form a heterocomplex rather it dimerizes upon ligand binding to initiate signaling cascades. These cascades promote cell proliferation differentiation and survival particularly impacting hematopoiesis and immune responses.
Pathways	Flt3 signaling impacts the internal signaling networks involving the MAPK/ERK and PI3K/AKT pathways both central to cell cycle regulation and apoptosis. Flt3 interacts functionally with proteins such as SHP2 and GRB2 in these pathways aiding signal transduction. The Flt3 receptor also shares functional motifs with KIT and PDGF receptors indicating shared regulatory mechanisms involved in cellular proliferation.
Associated diseases and disorders	Flt3 mutations especially internal tandem duplications in Flt3/ITD are significant in acute myeloid leukemia (AML) leading to abnormal cell growth and survival. These mutations often co-occur with other genetic anomalies such as NPM1 mutations contributing to the oncogenic process. The abnormal activation of Flt3 kinase activity also has ramifications in myelodysplastic syndromes making it a target for therapeutic intervention with drugs such as anti-FLT3 inhibitors in the treatment regime.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

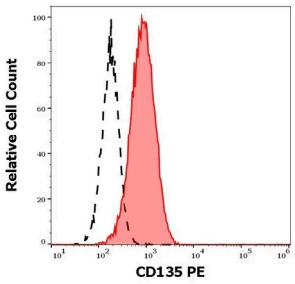
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

1 product image



Flow Cytometry - PE Anti-Flt3 / CD135 antibody [BV10A4] (ab106172)

Flt3 / CD135 Flow Cytometry staining of REH cells using mouse Anti-Flt3 / CD135 antibody

Separation of REH cells stained using ab106172 (20 µl reagent per million cells in 100 µl of cell suspension, red-filled) from REH cells stained using mouse IgG1 isotype control (MOPC-21) PE antibody (concentration in sample 5 µg/ml, same as 106172, black-dashed) in flow cytometry analysis (surface staining).

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