Revision 4

# FLT3 (BV10A4H2) Mouse mAb (Alexa Fluor® 647 Conjugate)

#72144 Store at +4C

Cell Signaling TECHNOLOGY®

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|
| FC-L | H | Endogenous | Mouse IgG1 | #P36888 | 2322 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Flow Cytometry (Live) | 1:50 |

## Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

## Specificity/Sensitivity

FLT3 (BV10A4H2) Mouse mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total FLT3 protein.

## Source / Purification

BV10A4H2 clone is produced by immunizing animals with the leukemic cell line BV-173 and Antibody is purified from tissue culture supernatant via protein G chromatography.

## Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct flow cytometric analysis in human cells.

## Background

FMS-related tyrosine kinase 3 (FLT3, also called FLK2) is a member of the Type III receptor tyrosine kinase family, which includes c-Kit, PDGFR, and M-CSF receptors. FLT3 is expressed on early hematopoietic progenitor cells and supports growth and differentiation within the hematopoietic system (1,2). FLT3 is activated after binding with its ligand FL, which results in a cascade of tyrosine autophosphorylation and tyrosine phosphorylation of downstream substrates (3). The p85 subunit of PI3 kinase, SHP2, GRB2, and Shc have all been reported to associate with FLT3 after FL stimulation (4-6). Tyr589/591 is located in the juxtamembrane region of FLT3 and may play an important role in regulation of FLT3 tyrosine kinase activity. Somatic mutations of FLT3 consisting of internal tandem duplications (ITDs) occur in 20% of patients with acute myeloid leukemia (7).

## Background References

1. Shurin, M.R. et al. (1998) *Cytokine Growth Factor Rev* 9, 37-48.
2. Naoe, T. et al. (2001) *Cancer Chemother Pharmacol* 48 Suppl 1, S27-30.
3. Namikawa, R. et al. (1996) *Stem Cells* 14, 388-95.
4. Beslu, N. et al. (1996) *J Biol Chem* 271, 20075-81.
5. Zhang, S. and Broxmeyer, H.E. (2000) *Biochem Biophys Res Commun* 277, 195-9.
6. Zhang, S. et al. (1999) *J Leukoc Biol* 65, 372-80.
7. Mizuki, M. et al. (2000) *Blood* 96, 3907-14.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Applications Key

**FC-L:** Flow Cytometry (Live)

## Cross-Reactivity Key

**H:** Human

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## Limited Uses

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