Revision 1

Store at -20C

#3463

# Phospho-FLT3 (Tyr969) (C24D9) Rabbit mAb

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355)
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W | H M | Endogenous | 160 | Rabbit IgG | #P36888 | 2322 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-FLT3 (Tyr969) (C24D9) Rabbit mAb detects endogenous levels of FLT3 only when phosphorylated at Tyr969. The antibody may cross-react with other tyrosine-phosphorylated proteins. (US Patent No. 7,183,385 and foreign equivalents assigned to Cell Signaling Technology, Inc.)

## Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to the sequence surrounding Tyr969 of human FLT3.

## 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).

Phospho-FLT3 (Tyr969) (C24D9) Rabbit mAb is directed against a previously unpublished FLT3 tyrosine phosphorylation site at Tyr969 that was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's MS/MS platform for phosphorylation site discovery. Phosphorylation of FLT3 at Tyr969 was observed in various leukemia, lymphoma and carcinoma cell lines and in tumors.

## 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).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse

## Trademarks and Patents



## Limited Uses

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