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## Phospho-FLT3 (Tyr591) Antibody (Alexa Fluor® 488 Conjugate)

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

Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
Endogenous	Rabbit	#P36888	2322
<b>Storage</b>	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.		
<b>Specificity/Sensitivity</b>	Phospho-FLT3 (Tyr591) Antibody detects endogenous FLT3 only when phosphorylated at tyrosine 591. The antibody does not cross-react with other FLT family members. It may cross-react with some tyrosine phosphorylated proteins. (US Patent No. 7,183,385 and foreign equivalents assigned to Cell Signaling Technology, Inc.)		
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr591 of human FLT3. Antibodies are purified by protein A and peptide affinity chromatography. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-5.		
<b>Description</b>	This Cell Signaling Technology Antibody was conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis of human cells. The unconjugated antibody #3461 reacts with human and mouse Phospho-FLT3 (Tyr591). CST expects that Phospho-FLT3 (Tyr591) Antibody (Alexa Fluor® 488 Conjugate) will also recognize Phospho-FLT3 (Tyr591) in these species.		
<b>Background</b>	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).		
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Shurin, M.R. et al. (1998) <i>Cytokine Growth Factor Rev</i> 9, 37-48.</li> <li>2. Naoe, T. et al. (2001) <i>Cancer Chemother Pharmacol</i> 48 Suppl 1, S27-30.</li> <li>3. Namikawa, R. et al. (1996) <i>Stem Cells</i> 14, 388-95.</li> <li>4. Beslu, N. et al. (1996) <i>J Biol Chem</i> 271, 20075-81.</li> <li>5. Zhang, S. and Broxmeyer, H.E. (2000) <i>Biochem Biophys Res Commun</i> 277, 195-9.</li> <li>6. Zhang, S. et al. (1999) <i>J Leukoc Biol</i> 65, 372-80.</li> <li>7. Mizuki, M. et al. (2000) <i>Blood</i> 96, 3907-14.</li> </ol>		

### Species Reactivity

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

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