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# Fc $\gamma$ RIIB (D8T4C) Rabbit mAb

Cell Signaling  
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#20312

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New 06/19

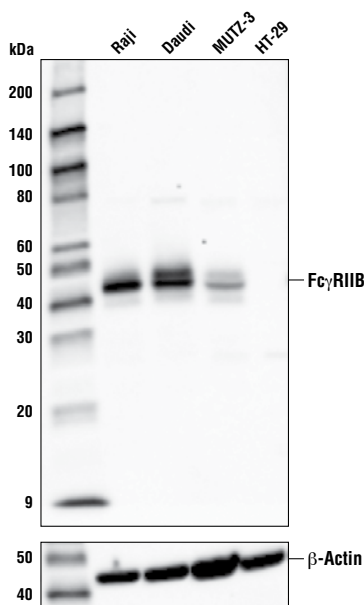
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Applications W, IP Endogenous	Species Cross-Reactivity* H	Molecular Wt. 40-50 kDa	Isotype Rabbit IgG**
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**Background:** Fc $\gamma$ RIIB (CD32B) is a low affinity, IgG Fc-binding receptor expressed on B cells, monocytes, macrophages, and dendritic cells (DCs) (1-3). It is the inhibitory Fc receptor and signals through an immunoreceptor tyrosine-based inhibitory motif (ITIM) within its carboxy-terminal cytoplasmic tail (2). Binding of immune complexes to Fc $\gamma$ RIIB results in tyrosine phosphorylation of the ITIM motif at Tyr292 and recruitment of the phosphatase SHIP, which mediates inhibitory effects on immune cell activation (2,4). In this way, Fc $\gamma$ RIIB suppresses the effects of activating Fc-binding receptors (3). For example, mice deficient for Fc $\gamma$ RIIB have greater T cell and DC responses following injection of immune complexes (5, 6). In addition, Fc $\gamma$ RIIB plays a role in B cell affinity maturation (7). Signaling through Fc $\gamma$ RIIB in the absence of signaling through the B cell receptor (BCR) is proapoptotic, while signaling through Fc $\gamma$ RIIB and the BCR simultaneously attenuates the apoptotic signal and results in selection of B cells with higher antigen affinity (7).

**Specificity/Sensitivity:** Fc $\gamma$ RIIB (D8T4C) Rabbit mAb recognizes endogenous levels of total Fc $\gamma$ RIIB protein. Based on western blot analysis of lysates from cells transfected with constructs expressing Fc $\gamma$ RIIA or Fc $\gamma$ RIIB, Fc $\gamma$ RIIB (D8T4C) Rabbit mAb has a strong preference for Fc $\gamma$ RIIB and demonstrates weak cross-reactivity with Fc $\gamma$ RIIA.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human Fc $\gamma$ RIIB protein.



Western blot analysis of extracts from various cell lines using Fc $\gamma$ RIIB (D8T4C) Rabbit mAb (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:200

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).

**Background References:**

- (1) Tridandapani, S. et al. (2002) *J. Biol. Chem.* 277, 5082-89.
- (2) Tridandapani, S. et al. (1997) *Mol. Cell. Biol.* 17, 4305-11.
- (3) Guilliams, M. et al. (2014) *Nat Rev Immunol* 14, 94-108.
- (4) Bruhns, P. et al. (2000) *J. Biol. Chem.* 275, 37357-64.
- (5) Kalergis, A.M. and Ravetch, J.V. (2002) *J Exp Med* 195, 1653-9.
- (6) Desai, D.D. et al. (2007) *J Immunol* 178, 6217-26.
- (7) Pearse, R.N. et al. (1999) *Immunity* 10, 753-60.

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

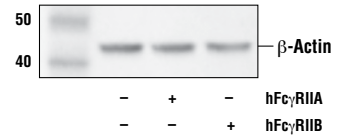
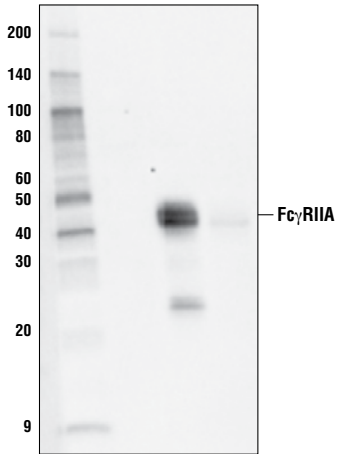
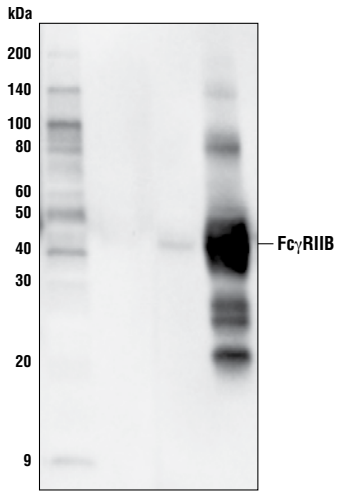
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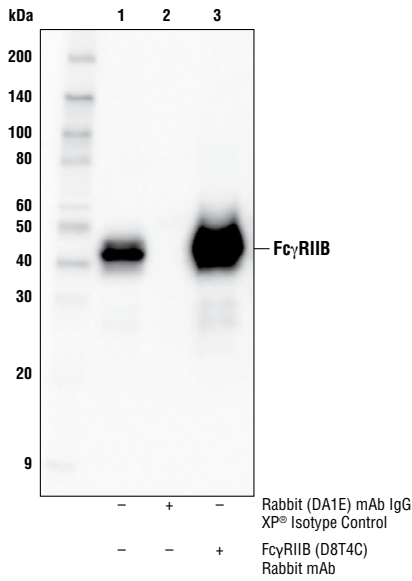
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



-	+	-	hFcγRIIA
-	-	+	hFcγRIIB



Immunoprecipitation of FcγRIIB from Raji cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is FcγRIIB (D8T4C) Rabbit mAb. Western blot analysis was performed using FcγRIIB (D8T4C) Rabbit mAb. Mouse Anti-Rabbit IgG (Conformation Specific) (L27A9) mAb (HRP Conjugate) #5127 was used as the secondary antibody.

Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing full-length human FcγRIIA (hFcγRIIA; +) or human FcγRIIB (hFcγRIIB; +) as indicated, using FcγRIIB (D8T4C) Rabbit mAb (upper), FcγRIIA antibody (middle), and β-Actin (D6A8) Rabbit mAb #8457 (lower).

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