

# AID (EK2 5G9) Rat mAb



**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
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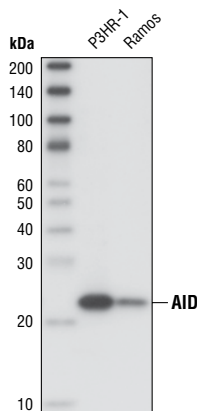
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H	24 kDa	Rat IgG2b κ**

**Background:** Activation-induced cytidine deaminase (AID) is thought to modify RNA due to its high homology to the RNA editing enzyme APOBEC-1. This function, however, has not been confirmed in *in vitro* studies, which show that AID has significant cytidine deaminase activity, and that this activity is blocked by zinc chelation (1).

The B cell immune system must specifically recognize several infectious agents, which vastly outnumber immunoglobulin gene segments present in a given organism. Mechanisms such as somatic hypermutation, isotype switch recombination and gene conversion introduce diversity and specificity to the immune system. Analysis of mouse models and patients with AID deficiency has established a link between all three of these mechanisms and AID function (2). AID protein is detected in germinal center centroblast and germinal center derived lymphomas (Burkitt lymphoma), but not in pre-germinal center B cells or post-germinal center neoplasms (B cell chronic lymphocytic leukemia and multiple myeloma) (3).

**Specificity/Sensitivity:** AID (EK2 5G9) Rat mAb detects endogenous levels of total AID protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to a region surrounding Asp191 of human AID.



Western blot analysis of total cell lysates from P3HR-1 and Ramos cell lines, using AID (EK2 5G9) Rat mAb.

Entrez-Gene ID #57379  
UniProt ID #Q9GZX7

**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.

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

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

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Background References:**

- (1) Muramatsu, M. et al. (1999) *J. Biol. Chem.* 274, 18470–18476.
- (2) Reynaud, C.A. et al. (2003) *Nat. Immunol.* 7, 631–638.
- (3) Pasqualucci, L. et al. (2004) *Blood* 104, 3318–3325.

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

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** 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.