

#4959 Store at -20C

AID (EK2 5G9) Rat mAb



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	24	Rat IgG2b	#Q9GZX7	57379

Product Usage Information	Application Western Blotting	Dilution 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	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.	
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 <i>in vitro</i> 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).	
Background References	1. Muramatsu, M. et al. (1999) <i>J. Biol. Chem.</i> 274, 18470-18476. 2. Reynaud, C.A. et al. (2003) <i>Nat. Immunol.</i> 7, 631-638. 3. Pasqualucci, L. et al. (2004) <i>Blood</i> 104, 3318-3325.	

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	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected
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