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#4959

AID (EK2 5G9) Rat mAb

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

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

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.

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

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