

AICDA Protein, Mouse (His-Myc)

Cat. No.:	HY-P72074
Synonyms:	Aicda; Aid; Single-stranded DNA cytosine deaminase; EC 3.5.4.38; Activation-induced cytidine deaminase; AID; Cytidine aminohydrolase
Species:	Mouse
Source:	E. coli
Accession:	Q9WVE0 (M1-F198)
Gene ID:	11628
Molecular Weight:	Approximately 31.5 kDa

PROPERTIES

AA Sequence	<pre> M D S L L M K Q K K F L Y H F K N V R W A K G R H E T Y L C Y V V K R R D S A T S C S L D F G H L R N K S G C H V E L L F L R Y I S D W D L D P G R C Y R V T W F T S W S P C Y D C A R H V A E F L R W N P N L S L R I F T A R L Y F C E D R K A E P E G L R R L H R A G V Q I G I M T F K D Y F Y C W N T F V E N R R E R T F K A W E G L H E N S V R L T R Q L R R I L L P L Y E V D D L R D A F R M L G F </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm solution of Tris-based buffer, 50% Glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Activation-induced cytidine deaminase (AICDA), an enzyme that mediates affinity maturation and facilitates DNA demethylation in germinal center (GC) B cells, is required for DLBCL pathogenesis and linked to inferior outcome. AICDA overexpression causes more aggressive disease in BCL2-driven murine lymphomas. Besides the role of AICDA in modifying cytosine methylation during the GC reaction¹³, AICDA is additionally a critical source of epigenetic heterogeneity in DLBCL. AICDA-linked epigenetic heterogeneity is predominantly associated with relative loss of cytosine methylation, consistent with the known mechanism of action of AICDA in cytosine deamination. AICDA-induced epigenetic heterogeneity increases</p>
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plasticity, permitting cancer cells a greater degree of population diversity and enhancing the adaptive capacity of the overall tumor^[1].

REFERENCES

[1]. Teater M, et, al. AICDA drives epigenetic heterogeneity and accelerates germinal center-derived lymphomagenesis. Nat Commun. 2018 Jan 15;9(1):222.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA