

# **Screening Libraries**

**Proteins** 

# **Product** Data Sheet

## **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

Mouse Species: Source: E. coli

Accession: Q9WVE0 (M1-F198)

Gene ID: 11628

Molecular Weight: Approximately 31.5 kDa

### **PROPERTIES**

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AA	~	മവ	11	Δ	n	~	Δ

MDSLLMKQKK FLYHFKNVRW AKGRHETYLC YVVKRRDSAT SCSLDFGHLRNKSGCHVELL FLRYISDWDL DPGRCYRVTW FTSWSPCYDC ARHVAEFLRW NPNLSLRIFT ARLYFCEDRK AEPEGLRRLH RAGVQIGIMT FKDYFYCWNT FVENRERTFK AWEGLHENSV RLTRQLRRIL LPLYEVDDLR DAFRMLGF

**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.

Reconsititution

It is not recommended to reconstitute to a concentration less than 100  $\mu g/mL$  in ddH<sub>2</sub>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.

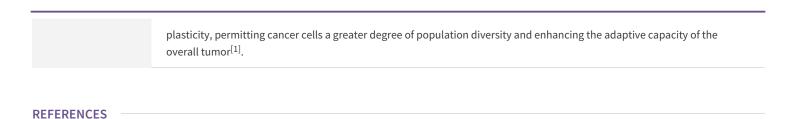
**Shipping** 

Room temperature in continental US; may vary elsewhere.

### **DESCRIPTION**

**Background** 

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 reaction 13, 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



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

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

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