

Recombinant Mouse SATB1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51608

Size: 10ug, 100ug

Protein Name: DNA-binding protein SATB1 (Special AT-rich sequence-binding protein 1)

Synonym: Satb1

UniProt ID: Q60611

UniProt Link: www.uniprot.org/uniprotkb/Q60611/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 764 AA

Molecular Weight: 86 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MDHLNEATQGKEHSEMSNNVSDPKGPPAKIARLEQNGSPLGRGRLGSTGGKMQGVPLKHSGHLM
KTNLRKGTMLPVFCVVEHYENAIEYDCKEEHAEFVLVRKDMFLNQLIEMALLSLGYSHSSAAQAKGLI
QVGKWNVPVPLSYVTDAPDATVADMLQDVYHVVTLKIQLHSCPKLEDLPPEQWSHTTVRNALKDLLK
DMNQSSLAKECPLSQSMISSIVNSTYYANVSAAKCQEFGRWYKHFKKTKDMMVEMDSLSELSQQG
ANHVNFGQQPVPGNTAEQPPSPAQLSHGSQPSVRTPLPNLHPGLVSTPISPQLVNQQLVMAQLLNQ
QYAVNRLLAQQLNQQYLNHPPVSRSMNKPLeQQVSTNTEVSSEIYQWVRDELKRAGISQAVFAR
VAFNRTQGLLSEILRKEEDPKTASQSLLVNL RAMQNFLQLPEAERDRIYQDERERSLNAASAMGPAP
LLSTPPSRPPQVKATLATERNKGKPENNTMNINASIYDEIQQEMKRAKVSQALFAKVAATKSQGWLC
ELLRWKEDPSPENRTLWENLSMIRRFSLPQPERDAIYEQESNAVHHHGDRPPHIIHVPAEQIQQQQ
QQQQQQQQQQQQPPPPPPQPQPQAGPRLPPRQPTVASSAESDEENRQKTRPRTKISVEALGILQ
SFIQDVGlypDEEAIQTLSAQLDLPKYTIKFFQNRYYLKHGKLKDNSGLEVDVAEYKDEELLKDLE
ESVQDKNANTLFSVKLEEELSVEGSTDVNADLKD

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant DNA-binding protein SATB1 (Special AT-rich sequence-binding protein 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Required for the switching of fetal globin species, and beta- and gamma-globin genes regulation during erythroid differentiation. Plays a role in chromatin organization and nuclear architecture during apoptosis (By similarity). Crucial silencing factor contributing to the initiation of X inactivation mediated by Xist RNA that occurs during embryogenesis and in lymphoma. Binds to DNA at special AT-rich sequences, the consensus SATB1-binding sequence (CSBS), at nuclear matrix- or scaffold-associated regions. Thought to recognize the sugar-phosphate structure of double-stranded DNA. Transcriptional repressor controlling nuclear and viral gene expression in a phosphorylated and acetylated status-dependent manner, by binding to matrix attachment regions (MARs) of DNA and inducing a local chromatin-loop remodeling. Acts as a docking site for several chromatin remodeling enzymes and also by recruiting corepressors (HDACs) or coactivators (HATs) directly to promoters and enhancers. Modulates genes that are essential in the maturation of the immune T-cell CD8SP from thymocytes. Promotes neuronal differentiation of neural stem/progenitor cells in the adult subventricular zone, possibly by positively regulating the expression of NEUROD1 (PubMed:26305964).

Subcellular Localization: Nucleus. Nucleus, PML body. Note=Organized into a cage-like network anchoring loops of heterochromatin and tethering specialized DNA sequences. When sumoylated, localized in promyelocytic leukemia nuclear bodies (PML NBs) (By similarity).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.