

Recombinant Mouse OAS1A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51267

Size: 10ug, 100ug

Protein Name: 2'-5'-oligoadenylate synthase 1A ((2-5')oligo(A) synthase 1A) (2-5A synthase 1A) (EC 2.7.7.84) (p42 OAS)

Synonym: Oas1a, Oias1

UniProt ID: P11928

UniProt Link: www.uniprot.org/uniprotkb/P11928/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 367 AA

Molecular Weight: 42 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEHGLRSIPAWTLDKFIEDYLLPDTTFGADVKSANVVCDFLKERCFCQGAHPVRVSKVVKGGSSG
KGTTTLKGKSDADLVVFLNNLT SFEDQLNRRGEFIKEIKKQLYEVQHERRFRVKFEVQSSWWPNARSL
SFKLSAPHLHQEVEFDVLPADFVLGHVNTSSKPDPRYAILIEECTSLGKDGEFSTCFTQLQRNFKQ
RPTKLKSLIRLVKHWYQLCKEKLGPPLPPQYALELLTVFAWEQNGNGCYEFNTAQGFRTVLELVINYQ
HLRIYWTKYDYDFQHQEVSKYLHRQLRKARPVILDPADPTGNVAGGNPEGWRRLAEEADVWLWYPC
FIKKDGSRVSSWDVPTVVPVPFEQVEENWTCILL

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 2'-5'-oligoadenylate synthase 1A ((2-5')oligo(A) synthase 1A) (2-5A synthase 1A) (EC 2.7.7.84) (p42 OAS) 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: Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response (PubMed:12396720, PubMed:34581622). In addition, it may also play a role in other cellular processes such as apoptosis, cell growth, differentiation and gene regulation (PubMed:12396720, PubMed:34581622). Catalyzes the formation of 2'-5'-oligoadenylates (2-5A) from polymerization of ATP which then bind to the inactive monomeric form of ribonuclease L (RNase L) leading to its dimerization and subsequent activation (PubMed:12396720, PubMed:34581622). Activation of RNase L leads to degradation of cellular as well as viral RNA, resulting in the inhibition of protein synthesis, thus terminating viral replication (PubMed:12396720, PubMed:34581622). Can mediate the antiviral effect via the classical RNase L-dependent pathway or an alternative antiviral pathway independent of RNase L (PubMed:12396720, PubMed:34581622). Involved in intercellular immune signaling that limits local spread of RNA virus infection and protects against tumorigenesis (By similarity). Can generate high levels of 2',5'-oligoadenylates in transformed cells, targeting them to innate and adaptive immunosurveillance mechanisms (By similarity).

Subcellular Localization: Cytoplasm . Mitochondrion . Nucleus . Microsome . Endoplasmic reticulum . Note=Associated with different subcellular fractions such as mitochondrial, nuclear, and rough/smooth microsomal fractions.

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.