

Recombinant ADAR1 protein



Catalog No: 82117, 82717

Expressed In: Baculovirus

Quantity: 50, 1000 µg

Source: Human

Buffer Contents: Recombinant ADAR1 protein is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

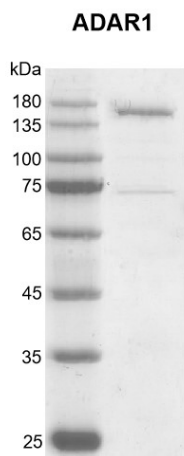
Background: ADAR1 (Double-stranded RNA-specific adenosine deaminase), Catalyzes the hydrolytic deamination of adenosine to inosine in double-stranded RNA (dsRNA) referred to as A-to-I RNA editing. This may affect gene expression and function in a number of ways that include mRNA translation by changing codons and hence the amino acid sequence of proteins since the translational machinery read the inosine as a guanosine; pre-mRNA splicing by altering splice site recognition sequences; RNA stability by changing sequences involved in nuclease recognition; genetic stability in the case of RNA virus genomes by changing sequences during viral RNA replication; and RNA structure-dependent activities such as microRNA production or targeting or protein-RNA interactions. Can edit both viral and cellular RNAs and can edit RNAs at multiple sites (hyper-editing) or at specific sites (site-specific editing).

Protein Details: Recombinant ADAR1 protein was expressed in a baculovirus expression system as the full length protein (accession number NP_001102.3) with an N-terminal FLAG tag. The molecular weight of the protein is 137.34 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

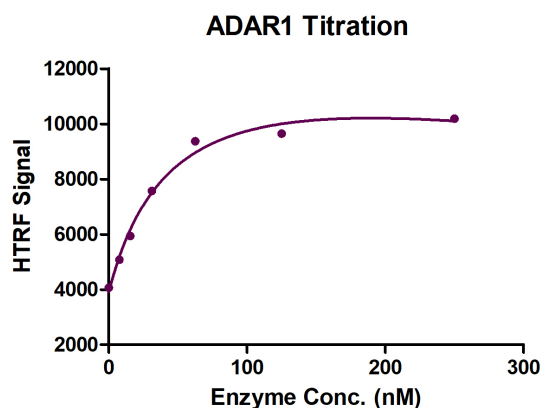


Recombinant ADAR1 protein gel.

ADAR1 protein was run on a 7.5% SDS-PAGE gel and stained with Coomassie Blue.

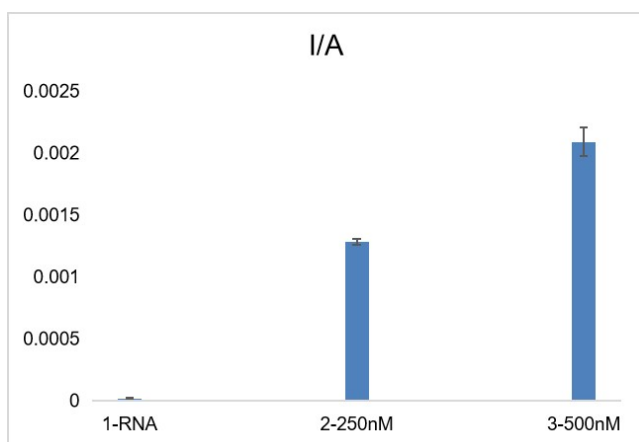
MW: 137.34 kDa

Purity: >95%



HTRF Assay for Recombinant ADAR1 activity.

2 μ M substrate dsRNA (5' biotin CGCGCGCGCGGGACAAUUAACCAAGGAAAAUAC AAGGACAGG GACC 3') was incubated with different concentrations of ADAR1 protein in reaction buffer containing 50 mM HEPES-NaOH pH 7.0, 0.1% BSA at room temperature for 1 hour. Anti-FLAG antibody was used to detect reaction products.



HPLC for ADAR1 activity.

2 μ M substrate RNA was incubated with different concentrations of ADAR1 protein in 40 μ l reaction system containing 20 mM HEPES (pH 7.9), 0.1 M KCl and 0.2 mM EDTA at 37°C for 1 hour, Detection of conversion rate from A to I by HPLC.