Recombinant human Ribonuclease A/RNASE 1 protein

Catalog Number: ATGP4051

PRODUCT INFORMATION

Expression system
HEK293

Domain
29-156aa

UniProt No.
P07998

NCBI Accession No.
NP_937878.1

Alternative Names
RNASE1, ribonuclease A family member 1, pancreatic, RAC1, RIB1, RNS1, ribonuclease pancreatic, HP-RNase, RIB-1, RNase UpI-1, RNase 1, Ribonuclease A, RNase A

Additional Information
N- terminal Sequence Analysis: Lys-Glu-Ser-Arg-Ala

PRODUCT SPECIFICATION

Molecular Weight
15.3kDa(134aa)

Concentration
1mg/ml (determined by Absorbance at 280nm)

Formulation
Liquid. In Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
90% by SDS – PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 5 X 10^4 unit/mg, and is defined as the amount of enzyme that cleaves 1.0 pmole of RNase probe per minute at 25C.

Tag
His-Tag

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

RNASE1, also known as ribonuclease A, is a member of pancreatic ribonuclease enzyme family. It is a relatively small protein and is a basic protein (pI = 9.63). Also, It has four disulfide bonds in its native state. It cleaves specifically after pyrimidine nucleotides. Cleavage takes place in two steps: first, the 3',5'-phosphodiester bond is cleaved to generate a 2',3'-cyclic phosphodiester intermediate; second, the cyclic phosphodiester is hydrolyzed to a 3'-monophosphate. (For example pG-pG-pC-pA-pG will be cleaved to give pG-pG-pCp and A-pG) The highest activity is exhibited with single stranded RNA. It can also hydrolyze RNA from protein samples. RNase A can be inhibited by alkylation of His12 and His119 and activated by potassium and sodium salts. Recombinant human RNASE1, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

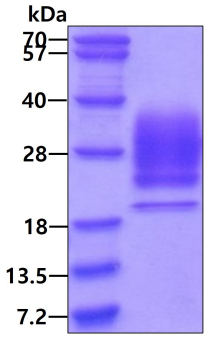
KESRAKKFQR QHMDSDSSPS SSTYCNQMM RRRNMTQGRC KPVNTFVHEP LVDVQNVCFQ EKVTCKNGQG NCYKSNSSMH ITDCRLTNGS RYPNCAYRTS PKERHIIVAC EGSPYVPVHF DASVEDST<HH HHHH>

General References

Raines RT (1998) Chem. Rev. 98:1045–1066.
JC Kosgey et al, (2020) Int. J. Biol. 160:1042-1049.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain