

# Recombinant human SRR protein

Catalog Number: ATGP1369

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-340aa

### UniProt No.

Q9GZT4

### NCBI Accession No.

NP\_068766

### Alternative Names

Serine racemase, ILV1, ISO1

## PRODUCT SPECIFICATION

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### Molecular Weight

39.1 kDa (364aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT

### Purity

> 85% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### 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.

## BACKGROUND

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### Description

SRR, also known as serine racemase, is an enzyme which generates D-serine from L-serine. D-serine acts as a neuronal signaling molecule by activating NMDA receptors in the brain. Mammalian serine racemase is a pyridoxal 5'-phosphate dependent enzyme that catalyzes both the racemization of L-serine to D-serine and also the elimination of water from L-serine, generating pyruvate and ammonia. The enzyme is physiologically stimulated by divalent cations (e. g., magnesium) and is allosterically activated by the magnesium/ATP complex. Recombinant human SRR protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using

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conventional chromatography.

### Amino acid Sequence

MGSSHHHHHH SSSLVPRGSH MGSHMCAQYC ISFADVEKAH INIRDSIHLT PVLTSILNQ LTGRNLFFKC ELFQKTGSFK  
IRGALNAVRS LVPDALERKP KAVVTHSSGN HGQALTYAAK LEGIPAYIVV PQTAPDCKKL AIQAYGASIV YCEPSDESRE  
NVAKRVTET EGIMVHPNQE PAVIAGQGTI ALEVLNQVPL VDALLVVPVGG GGMLAGIAIT VKALKPSVKV YAAEPSNADD  
CYQSKLKGKL MPNLYPPETI ADGVKSSIGL NTWPIIRDLV DDIFTVTEDE IKCATQLVWE RMKLLIEPTA GVGVAAVLSQ  
HFQTVSPEVK NICIVLSSGN VDLTSSITWV KQAERPASYQ SVSV

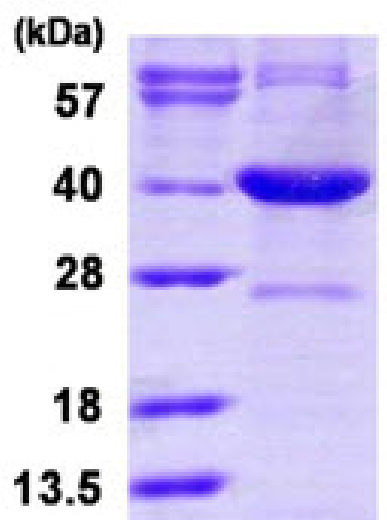
### General References

De Miranda J., et al. (2000) Gene. 256:183-188

Smith M.A., et al. (2010) J. Biol. Chem. 285:12873-12881

## DATA

### SDS-PAGE



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

15% SDS-PAGE (3ug)