

D-Serine Dehydratase, Active, Recombinant

CATALOG NO:	P1193-200	200 µg
	P1193-600	600 µg
ALTERNATE NAMES:	DsdSC, D-serine deaminase, DSD, DSD1	
SOURCE:	<i>E.coli</i>	
SEQUENCE:	The sequence is from <i>Saccharomyces cerevisiae</i>	
PURITY:	> 95% by SDS-PAGE	
MOL. WEIGHT:	~47.8 kDa, His tag	
FORM:	Lyophilized	
FORMULATION:	Proprietary buffer	
RECONSTITUTION:	Reconstitute in 50 mM potassium phosphate, 50 mM NaCl, pH 7.4.	
STORAGE CONDITIONS:	Reconstituted enzyme can be stored in working aliquots at -20°C and use within 3 months. Avoid repeated freeze-thaw cycles.	
DESCRIPTION:	D-Serine Dehydratase belongs to the β- family of the Pyridoxal phosphate-dependent enzymes and part of the fold-type II family. It binds to one catalytically essential PLP per protein molecule but also contains another low affinity PLP binding site. The enzyme converts D-Serine, D-threonine, D-allo-Threonine to corresponding α-keto acid and ammonia. It is suggested to act as a detoxifying enzyme for <i>E.Coli</i> strains.	
SPECIFIC ACTIVITY:	Specific activity is ≥ 60 mU/mg	
UNIT DEFINATION:	One Unit of DsdSC metabolizes 1 µmole of D-serine into pyruvate per minute at 37°C and pH 7.4, in the presence of pyridoxal-5-phosphate and catalytic Zn ²⁺ .	

FOR RESEARCH USE ONLY! Not to be used on humans.

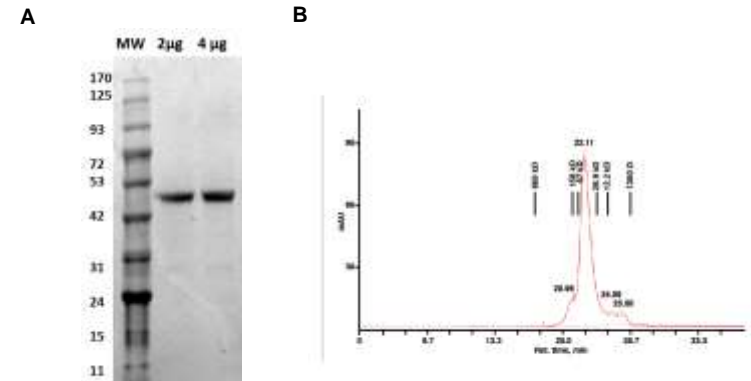


Fig A. SDS-PAGE (4-20%) of recombinant D Serine Dehydratase: Recombinant Protein loaded under reducing conditions and stained with Coomassie Blue. Lane MW Marker, Lanes 2-3 D Serine Dehydratase

Fig B. Size exclusion chromatography of DsdSC: SEC analysis of DsdSC using a Superose 6 Increase 5/150 GL column at 0.1 ml/min in 50 mM sodium phosphate and 0.3 M NaCl pH 7.2

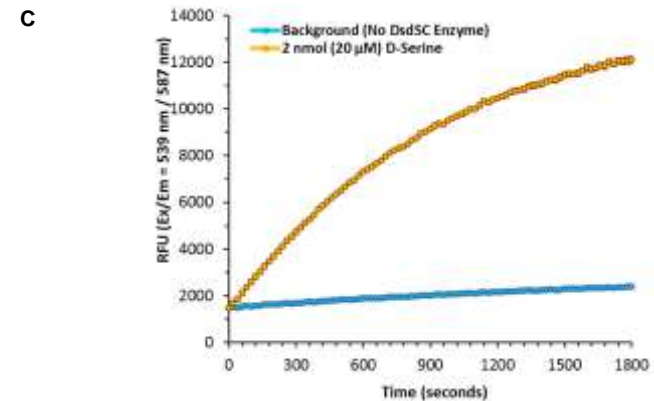


Fig C. Activity of active DsSC: Specific activity of DsdSC is ≥ 60 mU/mg. In the assay, Pyruvate production from 20 µM D Serine by 1 µg of DsdSC is measured.

RELATED PRODUCTS:

- DL-Serine Assay Kit (Cat. No. K988-100)
- L-Amino Acid Quantitation Colorimetric/Fluorometric Kit (Cat. No. K639-100)