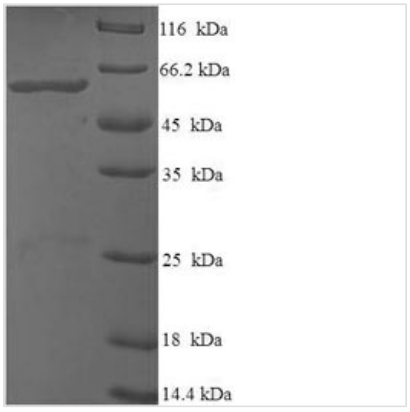
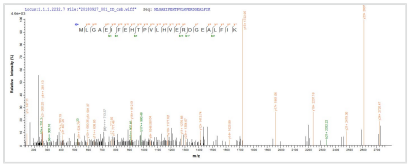
Recombinant Bacillus subtilis Glycine oxidase (thiO)

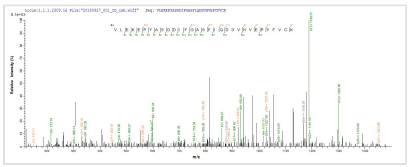
Product Code	CSB-EP521738BRJ
Relevance	Catalyzes the FAD-dependent oxidative deamination of various amines and D-amino acids to yield the corresponding alpha-keto acids, ammonia/amine, and hydrogen peroxide. Oxidizes sarcosine (N-methylglycine), N-ethylglycine and glycine. Can also oxidize the herbicide glyphosate (N-phosphonomethylglycine). Displays lower activities on D-alanine, D-valine, D-proline and D-methionine. Does not act on L-amino acids and other D-amino acids. Is essential for thiamine biosynthesis since the oxidation of glycine catalyzed by ThiO generates the glycine imine intermediate (dehydroglycine) required for the biosynthesis of the thiazole ring of thiamine pyrophosphate.
Abbreviation	Recombinant Bacillus subtilis thiO protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O31616
Product Type	Recombinant Protein
Immunogen Species	Bacillus subtilis (strain 168)
Purity	≥ 90% as determined by SDS-PAGE.
Sequence	MKRHYEAVVIGGGIIGSAIAYYLAKENKNTALFESGTMGGRTTSAAAGMLGAH AECEERDAFFDFAMHSQRLYKGLGEELYALSGVDIRQHNGGMFKLAFSEEDV LQLRQMDDLDSVSWYSKEEVLEKEPYASGDIFGASFIQDDVHVEPYFVCKAYV KAAKMLGAEIFEHTPVLHVERDGEALFIKTPSGDVWANHVVVASGVWSGMFF KQLGLNNAFLPVKGECLSVWNDDIPLTKTLYHDHCYIVPRKSGRLVVGATMKP GDWSETPDLGGLESVMKKAKTMLPAIQNMKVDRFWAGLRPGTKDGKPYIGR HPEDSRILFAAGHFRNGILLAPATGALISDLIMNKEVNQDWLHAFRIDRKEAVQI
Research Area	Others
Source	E.coli
Target Names	thiO
Expression Region	1-369aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	56.9kDa
Protein Length	Full Length
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP521738BRJ could indicate that this peptide derived from E.coli-expressed Bacillus subtilis (strain 168) thiO.



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Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
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