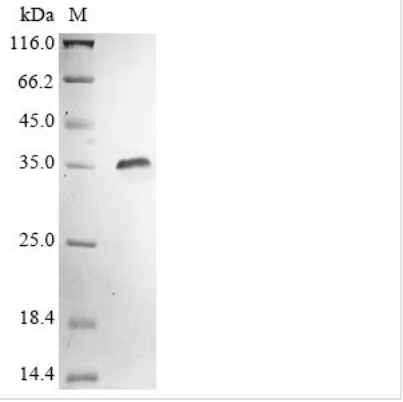
Recombinant Streptococcus equi subsp. zooepidemicus IgG endopeptidase (ideZ)

Product Code	CSB-EP3597GOM
Abbreviation	Recombinant Streptococcus equi subsp. zooepidemicus ideZ 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.	Q0PIW1
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol.If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Streptococcus equi subsp. zooepidemicus
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	DDYQRNAAEVYAKEVPHQITSVWTKGVTPLTPEQFRYNNEDVIHAPYLAHQG WYDITKVFDGKDNLLCGAATAGNMLHWWFDQNKTEIEAYLSKHPEKQKIIFNN QELFDLKAAIDTKDSQTNSQLFNYFRDKAFPNLSARQLGVMPDLVLDMFINGY YLNVFKTQSTDVNRPYQDKDKRGGIFDAVFTRGDQTTLLTARHDLKNKGLNDI STIIKQELTEGRALALSHTYANVSISHVINLWGADFNAEGNLEAIYVTDSDANASI GMKKYFVGINAHGHVAISAKKIEGENIGAQVLGLFTLSSGKDIWQKLS
Research Area	others
Source	E.coli
Target Names	ideZ
Expression Region	35-349aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 13xHis-tagged
Mol. Weight	37.3 kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

IdeZ is a protease that has been identified as a homolog of IdeS, which is an immunoglobulin-degrading enzyme found in Streptococcus pyogenes [1]. IdeZ shares 99% amino acid sequence identity with IdeE and is more closely related to the Mac-2 protein of S. pyogenes [1]. It has been reported that IdeZ has the same specificity as IdeS but exhibits improved activity towards certain subclasses of immunoglobulin G (IgG) and has been utilized for the characterization of Fc fusion proteins [2]. Furthermore, IdeZ has been implicated in gene therapy, particularly in the context of adeno-associated virus (AAV) gene therapy, where it has shown potential similar to IdeS [3]. Additionally, IdeZ has been used in research to release the Fab portion of antibodies by treating them with IdeZ protease [4]. Moreover, IdeZ has been employed in the production of subunit liquid chromatography-mass spectrometry analysis by coupling with enzymes to produce specific subunits [5].

References:
[1] U. Pawel-Rammingen, "Streptococcal ides and its impact on immune response and inflammation", Journal of Innate Immunity, vol. 4, no. 2, p. 132-140, 2012. https://doi.org/10.1159/000332940
[2] R. O'Flaherty, I. Trbojevi??Akma?i?, G. Greville, P. Rudd, & G. Lauc, "The sweet spot for biologics: recent advances in characterization of biotherapeutic glycoproteins", Expert Review of Proteomics, vol. 15, no. 1, p. 13-29, 2017. https://doi.org/10.1080/14789450.2018.1404907
[3] D. Gross, N. Tedesco, C. Leborgne, & G. Ronzitti, "Overcoming the challenges imposed by humoral immunity to aav vectors to achieve safe and efficient gene transfer in seropositive patients", Frontiers in Immunology, vol. 13, 2022. https://doi.org/10.3389/fimmu.2022.857276
[4] J. Earnest, K. Basore, V. Roy, A. Bailey, D. Wang, G. Alteret al., "Neutralizing antibodies against mayaro virus require fc effector functions for protective activity", The Journal of Experimental Medicine, vol. 216, no. 10, p. 2282-2301, 2019. https://doi.org/10.1084/jem.20190736
[5] T. Morgan, C. Jakes, H. Brouwer, S. Millán-Martín, J. Chervet, K. Cooket al., "Inline electrochemical reduction of nistmab for middle-up subunit liquid chromatography-mass spectrometry analysis", The Analyst, vol. 146, no. 21, p. 6547-6555, 2021. https://doi.org/10.1039/d1an01184g

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. 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.