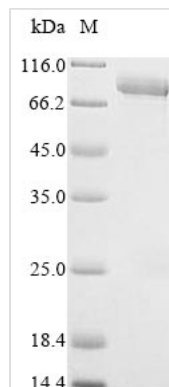




Recombinant Human Lactoperoxidase (LPO)

Product Code	CSB-MP013066HU
Relevance	Antimicrobial agent which utilizes hydrogen peroxide and thiocyanate (SCN) to generate the antimicrobial substance hypothiocyanous acid (HOSCN). May contribute to airway host defense against infection.
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.	P22079
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	TRTAIRNGQVWEESLKRLRQKASLTNVTDPISLDLTSLSLEVGC GAPAPVVRCD PCSPYRTITGDCNNRRKPALGAANRALARWLPAEYEDGLSLPFGWTPGKTRN GFPLPLAREVSNKIVGYLNEEGVLDQNRSLLFMQWGQIVDHDLDFAFDTELGS SEYSKAQCDEYCIQGDNCFPIMFPPNDPKAGTQGKCMPPFFRAGFVCPTPPYK SLAREQINALTSFLDASFVYSSEPSLASRLRNLSSPLGLMAVNQEVS DHGLPYL PYDSKKPSPCEFINTTARVPCFLAGDSRASEHILLATSHTLFLREHNRLARELK RLNPQWDGEKLYQEARKILGAFVQIITFRDYLPIILLGDHMQKWIPPYQGYSESV DPRISNVFTFAFRFGHLEVPSSMFRLDENYQPWGPEPELPLHTLFFNTWRMV KDGGIDPLVRGLLAKKSKLMKQNKMMTGELRNKLFQPTHRIHGFDLAAINTQR CRDHGQPGYNSWRAFCDSLQPTLEELNTVLKSKMLAKLLGLYGTPDNIDI WIGAIAPLVERGRVGPLLACLLGKQFQQIRDGDRFWWENPGVFTNEQKDSL QKMSFSRLVCDNTRITKVPRDPFWANSYPYDFVDCSAIDKLDLSPWASVKN
Lead Time	3-7 business days
Research Area	Others
Source	Mammalian cell
Gene Names	LPO
Protein Names	Salivary peroxidase Short name: SPO SAPX
Expression Region	81-712aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	76.6 kDa
Protein Description	Full Length of Mature Protein
Image	



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

Description

The region for expressing recombinant Human LPO contains amino acids 81-712. This LPO protein is theoretically predicted to have a molecular weight of 76.6 kDa. Expression of this LPO protein is conducted in mammalian cell. The N-terminal 10xHis tag and C-terminal Myc tag was fused into the coding gene segment of LPO, making it easier to detect and purify the LPO recombinant protein in the later stages of expression and purification.

The human lactoperoxidase (LPO) is an enzyme belonging to the peroxidase family and is primarily found in secretory fluids such as milk, saliva, and tears. LPO plays a crucial role in innate immune defense mechanisms. It contributes to the antimicrobial activity of these fluids by catalyzing the oxidation of thiocyanate and iodide ions, producing reactive intermediates that possess antimicrobial properties. Additionally, LPO is involved in the generation of reactive oxygen species, contributing to the elimination of bacteria and other pathogens. Research on lactoperoxidase focuses on its role in host defense, its potential applications in food preservation, and its relevance to human health.

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.