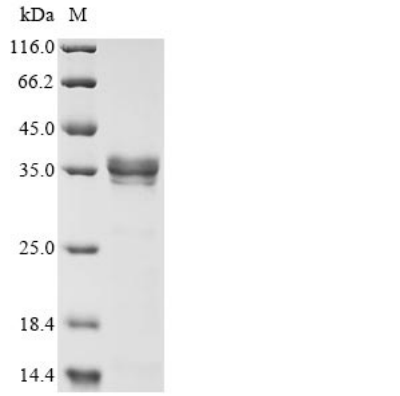
Recombinant Human metapneumovirus Matrix protein (M)

Product Code	CSB-YP761526HDAM
Abbreviation	Recombinant Human metapneumovirus Matrix 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.	Q6WB99
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	Human metapneumovirus (strain CAN97-83) (HMPV)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MESYLVDTYQGIPYTAAVQVDLVEKDLLPASLTIWFPLFQANTPPAVLLDQLKT LTITTLYAASQSGPILKVNASAQGAAMSVLPKKFEVNATVALDEYSKLEFDKLTV CEVKTVYLTTMKPYGMVSKFVSSAKPVGKKTHDLIALCDFMDLEKNTPVTIPAF IKSVSIKESESATVEAAISSEADQALTQAKIAPYAGLIMIMTMNNPKGIFKKLGAG TQVIVELGAYVQAESISKICKTWSHQGTRYVLKSR
Research Area	Tags & Cell Markers
Source	Yeast
Target Names	M
Expression Region	1-254aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	28.9 kDa
Protein Length	Full Length
Image	



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

Description

In the general approach to express the recombinant human metapneumovirus (HMPV) matrix (M) protein, a plasmid encoding the human metapneumovirus matrix protein (1-254aa) and the N-terminal 6xHis-tag is first constructed. The constructed plasmid is then introduced into yeast cells. Yeast cells-containing plasmid are screened and cultured under conditions that induce the protein expression. Lysing the cultured cells and purifying the resulting recombinant matrix protein through affinity purification. The SDS-PAGE analysis is conducted to confirm the presence of the recombinant matrix protein and assess its purity. Its purity is over 85%.

HMPV is a significant pathogen associated with respiratory tract infections, particularly affecting infants and young children [1]. The genome of HMPV consists of various genes, including the matrix (M), fusion (F), and nucleoprotein (N) genes [2]. The matrix protein of HMPV plays a crucial role in the infectivity of the virus, as demonstrated in a study that quantitated its presence [3]. The matrix protein and other viral genes like the polymerase gene can detect the presence of HMPV due to their low variation rate [4].

References:
[1] J. Williams, P. Harris, S. Tollefson, L. Halburnt-Rush, J. Pingsterhaus, K. Edwardset al., "Human metapneumovirus and lower respiratory tract disease in otherwise healthy infants and children", New England Journal of Medicine, vol. 350, no. 5, p. 443-450, 2004. https://doi.org/10.1056/nejmoa025472
[2] J. Greensill, P. McNamara, W. Dove, B. Flanagan, R. Smyth, & C. Hart, "Human metapneumovirus in severe respiratory syncytial virus bronchiolitis", Emerging Infectious Diseases, vol. 9, no. 3, p. 372-375, 2003. https://doi.org/10.3201/eid0903.020289
[3] S. Thammawat, T. Sadlon, P. Adamson, & D. Gordon, "Effect of sialidase fusion protein (das 181) on human metapneumovirus infection of hep-2 cells", Antiviral Chemistry and Chemotherapy, vol. 24, no. 5-6, p. 161-165, 2015. https://doi.org/10.1177/2040206616665971
[4] M. López-Huertas, I. Casas, B. Acosta-Herrera, M. García, M. Coiras, & P. Pérez-Breña, "Two rt-pcr based assays to detect human metapneumovirus in nasopharyngeal aspirates", Journal of Virological Methods, vol. 129, no. 1, p. 1-7, 2005. https://doi.org/10.1016/j.jviromet.2005.05.004

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.