Antagen Pharmaceuticals

Name: PhoSL–hIgG1 fusion protein **Product Data Sheet**	**Catalog: PhoSL-hIgG1**

Components:	· PhoSL–hIgG1 fusion protein · Antibody Data Sheet
Amount:	>>100 µg
Fusion tag:	Human IgG1 Fc
Host cell:	Fut8-/- CHO, so that the Fc part does not contain fucose to complicate binding
Reactivity:	Fucose
Purity:	> 95% as determined by SDS-PAGE and Coomassie blue staining
Applications:	Flow cytometry
Suggested dilution:	Use at 2 µg/mL
Concentration:	3.75 mg/mL, measured by OD280 after 0.22 um filtration
Buffer:	100 mM Glycine-HCL + 75 mM Tris.HCL, pH7.0
Purification:	Affinity purified by Protein A column
Storage Condition:	Shipped at 4℃. Upon delivery store at -20℃. Dilute in PBS (pH7.2) if necessary. Stable for 12 months from date of receipt. Avoid repeated freeze-thaws.
Validation Data:	See next page

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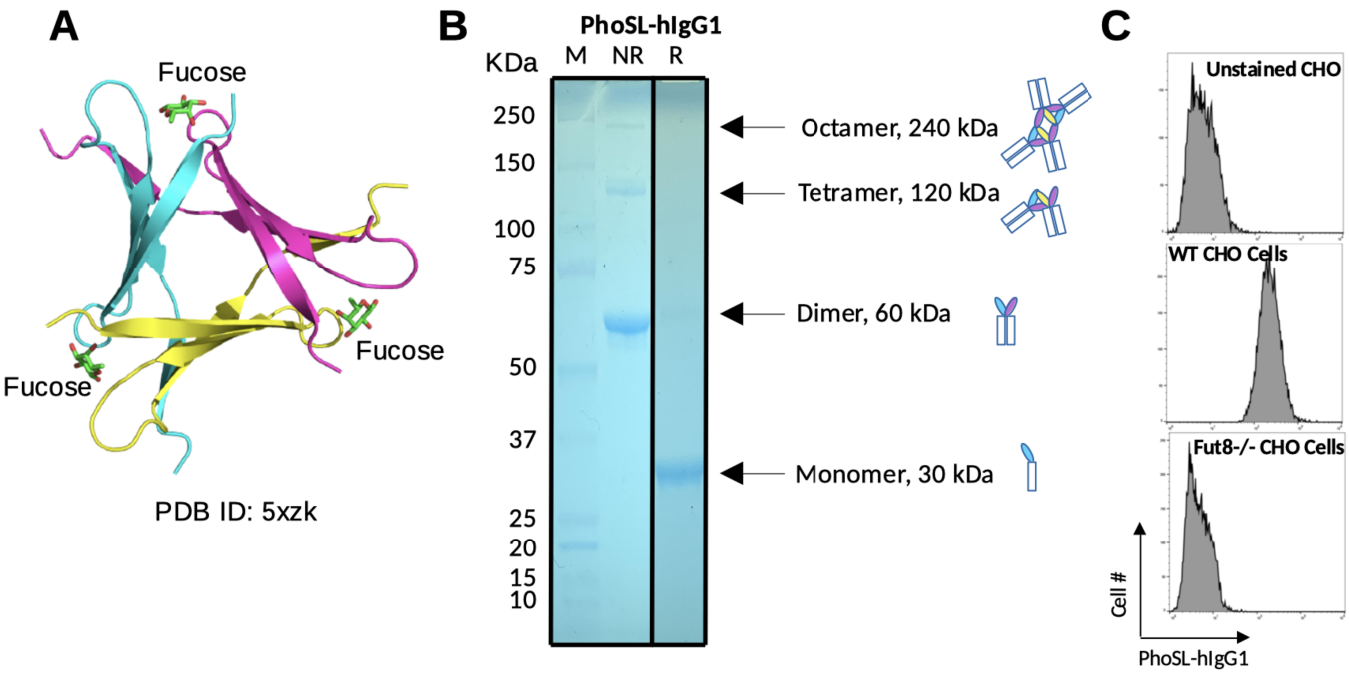

Figure 1: Characterization of recombinant PhoSL-hIgG1 expressed from *Fut8*-/- CHO cells. (**A**) The crystal structure of trimeric PhoSL (PDB: 5xzk) in complex with L-fucose, where the PhoSL monomers are shown in different colors. The fucose-binding pocket is formed by the turn between β1 and β2 strands of one monomer and the N-terminus of a neighboring monomer. (**B**) SDS-PAGE of PhoSL-hIgG1. Reducing gel shows a major band at around 30 kDa. Non-reducing gel shows dimer, tetramer and octamer at decreasing ratios. Possible organizations of the macromolecules are illustrated on the right. (**C**) Staining WT and *Fut8*-/- CHO cells with PhoSL-hIgG1 (2.0 μg/mL). While WT CHO cells are strongly positive by PhoSL-hIgG1 staining, Fut8 deficiency completely knocked out PhoSL-hIgG1 binding activities.

References:

1. Beyond antibody fucosylation: α-(1, 6)-fucosyltransferase (Fut8) as a potential new therapeutic target for cancer immunotherapy. C Mao, J Li, L Feng, W Gao. ***Antibody Therapeutics*** 6 (2), 87-96, 2023.

2. Glycoengineered anti-CD39 promotes anticancer responses by depleting suppressive cells and inhibiting angiogenesis in tumor models. H Zhang, L Feng, P de Andrade Mello, C Mao, R Near, E Csizmadia, et al. ***The Journal of Clinical Investigation*** 132 (13), e157431, 2022.

3. Cross-species higher sensitivities of FcγRIIIA/FcγRIV to afucosylated IgG for enhanced ADCC. C Mao, R Near, X Zhong, W Gao. ***Antibody Therapeutics*** 4 (3), 159-170, 2021.

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