

Echelon Biosciences Inc.

Cardiolipin Grip™

G-CL01

Support: echelon@echelon-inc.com

Description:

Recombinant N-terminal GST-tagged cardiolipin binding protein expressed in *E. coli*.

Properties:

Size – 2.5 µg, 10 µg, & 50 µg

Form – Liquid

Source – purified from *E. coli*

Concentration – 0.5 or 1.0 µg/mL; please see CoA for lot specific information

Storage – Store protein at -20 °C. The protein is stable for at least one week at 4 °C or 3 months at -20 °C. For multiple uses, aliquot the obtained protein stock solution and store at -20°C.

Storage Buffer – 10% glycerol, 150 mM NaCl, 50 mM Tris, 1 mM DTT, pH 7.5

M.W. of Protein – 55.2 kDa including GST tag

Purity – >90% by SDS-PAGE

Specificity – recognizes Cardiolipin (CL). Does not bind phosphatidylinositol, phosphatidylglycerol, phosphatidylserine, or cholesterol. Some cross-reactivity observed with phosphatidic acid.

Background:

CL is an anionic phospholipid present in mitochondrial and bacterial membranes and is critical for optimal energy metabolism. Defects in CL synthesis are associated with several diseases including Barth's Syndrome and circulating antibodies to CL are associated with anti-phospholipid syndrome (APS).

Applications:

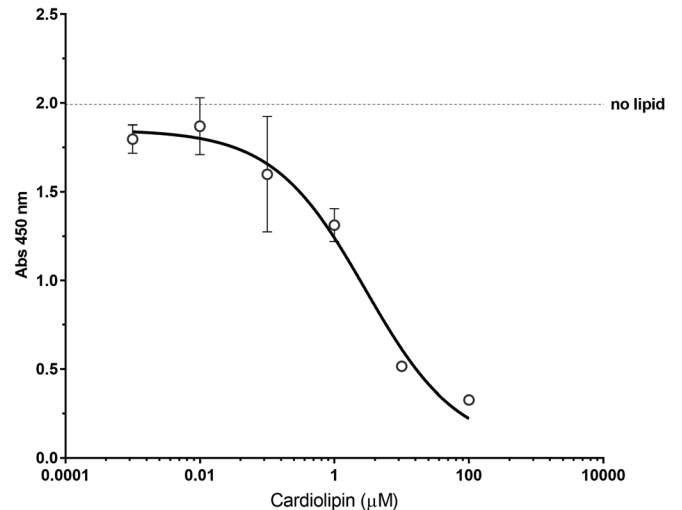
ELISA – 1.0 µg/mL

G-CL01 recognizes multiple species of cardiolipin in a competitive format on cardiolipin coated plates. PBS is recommended for dilution of G-CL01. G-CL01 has been validated with purified, synthetic lipids.

Detection of G-CL01 should be performed with an anti-GST, enzyme-conjugated secondary antibody.

Other *in vitro* applications are possible using this protein but have not been internally validated by Echelon Biosciences. Optimal usage concentrations should be determined by the user.

Data: ELISA



Cardiolipin coated on 96-well plate detected with 1.25 µg/mL G-CL01. Signal competed with Cardiolipin 16:0 (L-C160). IC50 = 2.8 µM

References:

1. T. A. Weber, S. Koob, H. Heide, I. Wittig, B. Head, A. van der Bliek, U. Brandt, M. Mittelbronn and A. S. Reichert (2013) APOOL is a cardiolipin-binding constituent of the Mitofilin/MINOS protein complex determining cristae morphology in mammalian mitochondria. PLoS One 8(5):e63683
2. M. Desmurs, M. Foti, E. Raemy, F. Maxime Vaz, J. Martinou, A. Bairoch, L. Lane (2015) C11orf83, a Mitochondrial Cardiolipin-Binding Protein Involved in bc1 Complex Assembly and Super-complex Stabilization. MCB 35(7); 1139-1156

Related Products:

Products	Catalog Number
Reagents	
Cardiolipin Beads	P-BCLP
Lipids	
Aminocardiolipin	L-C16A
Synthetic 16:0 Cardiolipin	L-C160
Synthetic 16:0 Monolysocardiolipin	L-M160
Biotin Cardiolipin	L-C16B
Assays	
Membrane Lipid Strips	P-6002

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