

Supplementary Figure:

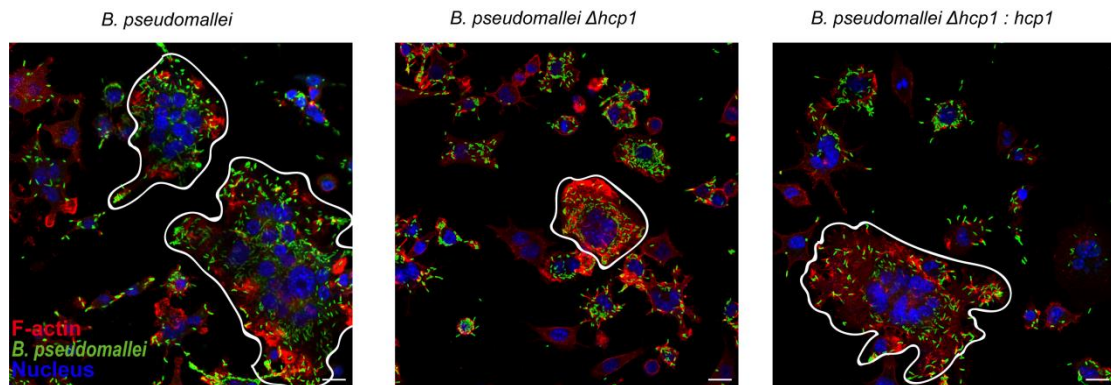


Figure S1. Hcp1 is required for MNGC formation. Bacteria, cytoskeleton, and nucleus were stained with *B. pseudomallei* polyclonal antibodies, Actin-Tracker Red-594, and DAPI. Images were acquired by confocal laser-scanning microscope, and the white line is the MNGC. Scale bar, 20 μm .

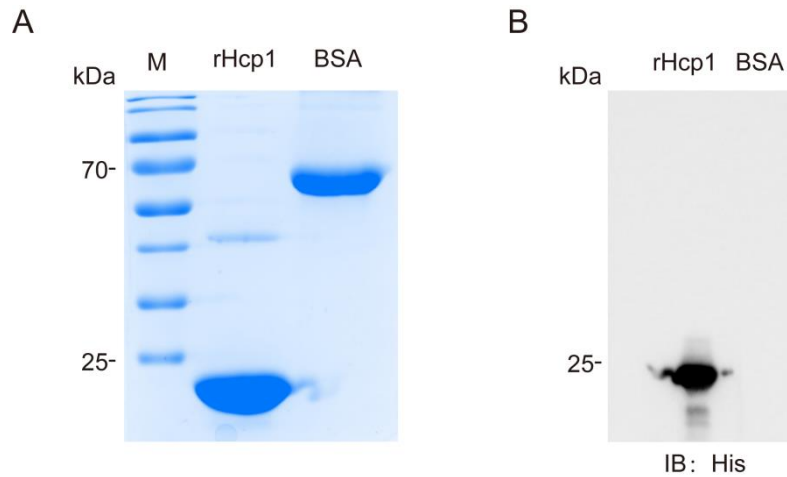


Figure S2. Preparation of rHcp1. (A) The purified rHcp1 was detected by SDS-PAGE. Lane M: protein markers. (B) Western blotting showed that rHcp1 was specifically recognized by anti-His tag antibody.

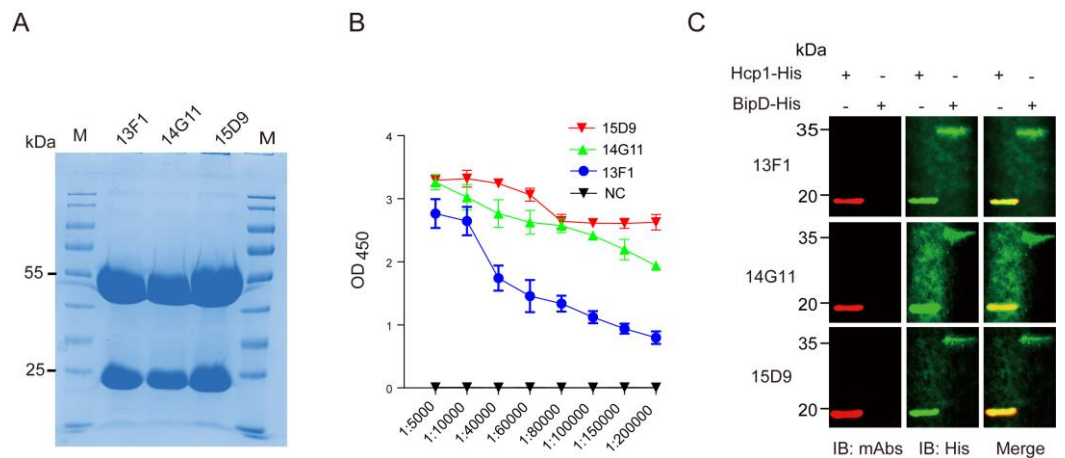
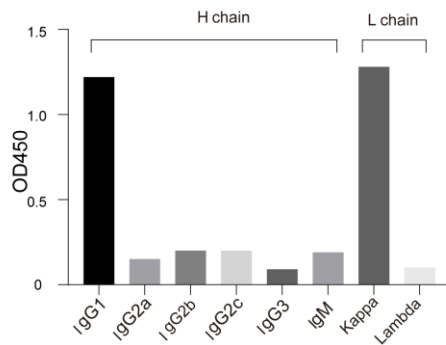


Figure S3. Analysis of anti-rHcp1 mAbs. (A) SDS-PAGE detection of purified anti-rHcp1 mAbs. Lanes 13F1, 14G11, and 15D9: three anti-rHcp1 mAbs; M: protein marker. (B) ELISA measurement of the titer of three mAbs, with the abscissa being the dilution ratio of the mAbs. (C) rHcp1-His and rBipD-His were detected with anti-rHcp1 mAbs and fluorescent secondary antibodies.

A



B

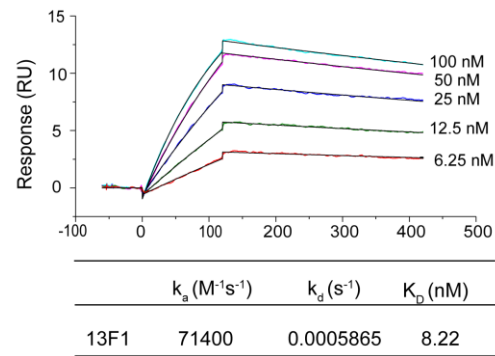


Figure S4. Subtype and affinity analysis of 13F1. (A) Identified the subtype of 13F1 by ELISA. (B) Kinetic interaction of Hcp1 with protective MAb 13F1 as visualized by SPR with a BiacoreT200 machine. The association and dissociation phases were monitored for 120 s by following the change in SPR signal (colored curves) and recording resonance units (RU). Black curves represent the fit of data to a single-site binding model. Kinetic parameters derived from these experiments are listed. The binding phase was used to determine the association constant (k_a) between mAbs and Hcp1. The dissociation phase (k_d) was measured using the rate of decline in RU on introduction of free buffer at the end of mAbs injections, and the dissociation constant (K_D) of the complexes was determined as the ratio k_d/k_a .

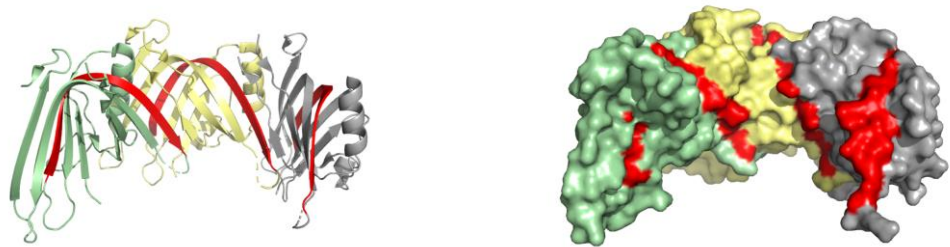


Figure S5. Cartoon (left) and surface (right) of rHcp1 as defined by X-ray structural data (PDB:4TV4). This structure is based on a trimer which consists of three Hcp1 monomers. Amino acid residues in green, yellow and gray represent these three Hcp1 monomers. Amino acids in red (Asp95-Leu114) represent a major epitope recognized by 13F1. Image was created with the PyMOLTM Software.