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Crystallization and Preliminary X-ray Analysis of V4-133 Globin. Aida Baharuddin^a, Jennifer Saito^b, Rashidah Abdul Rahim^a, Claude Didierjean^c, Maqsudul Alam^b. "School of Biological Sciences, Universiti Sains Malaysia, Malaysia. "Department of microbiology, University of Hawaii, Honolulu, Hawaii, USA. "Laboratoire de Crystallographie et Modélisation des Matériaux Minéraux, et Biologiques (LCM3B), Nancy Université, France.

E-mail: aidabaha@usm.my

Methylokorus infernorum is an extremely acidophilic aerobic methanotroph that grow optimally at pH 2.0-2.5 and belongs to phylum Verrucomicrobia [1]. Analysis of Methylokorus infernorum genome indicates an open reading frame containing globin motif (accession YP 001939748) as V4-133 Globin. V4-133 Globin is a single domain haem protein of 133 amino acid residues. Sequence similarity search by BLASTP [2] indicates V4-133 Globin is very similar to the hemoglobin (accession NC 010162.1) from Sorangium cellulosum bacteria with 45% sequence identity. Crystal of V4-133 Globin were grown by hanging drop method against 1.5 M ammonium sulfate 0.1 M sodium acetate trihydrate, pH 4.6 into the orthorhombic space group. Prior to data collection, V4-133 Globin crystals were moved to the same reservoir supplemented with 20% (v/v) glycerol and flash cooled to 100 K. Diffraction data for V4-133 Globin were collected at the European Synchontron Radiation Facility in Grenoble on beamline BM30A at Fe peak wavelength and were processed to 2.0 Å. Phasing was carried out by taking advantage of the presence of the iron atom in the heme prosthetic group. Single anomalous dispersion (SAD) method was used to solve the V4-133 Globin. The result indicates that there are three monomers in the asymmetric unit. Further analysis of these data is under the way.

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