

BAG report_Soler_Gutsche (05/04/2021 – 07/04/2021)

ACAD9

In addition to its role in Fatty Acid Oxidative (FAO) processes, ACAD9 is a core component of the Mitochondrial Complex I Assembly (MCIA) complex, involved in the assembly of respiratory Complex I. Our group has recently solved the structure of ACAD9 in complex with another protein (ECSIT), forming an MCIA subcomplex. To identify structural differences caused upon binding ECSIT, we used this BAG time to collect ACAD9 alone at CM01. It had previously been observed that ACAD9 has a strong preferential orientation, and although we saw very promising results from screening UltrAuFoil grids this remained the case in this dataset. We were able to determine an anisotropic 8Å map of ACAD9 alone that provided some information on structural differences between the bound and unbound states, however, we subsequently pursued a tilted data collection to obtain a higher resolution dataset, to be combined with this dataset.