BIOCHEMICAL ANALYSIS OF A NEW ‘HIS-TAG-PS2-PREPARATION’ FROM *Thermosynechococcus elongatus*

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We have recently developed a new ‘His-tag-PS2-preparation’ from *Thermosynechococcus elongatus* to speed up and facilitate the isolation of reaction centers and to enable the oriented immobilization suitable for an applied approach. By engineering 10 additional histidine residues to the C-terminus of the CP47 subunit we are now able to isolate highly active core complexes via Ni-chelate chromatography followed by IEC. Intensive biochemical analysis of wild-type and mutant with focus on the subunit composition of both monomers and dimers reveals the presence of previously uncharacterized components with unknown function yet. Our preliminary data suggest a new soluble subunit on the PS2-donor site which is exclusively bound to the monomeric form of the complex. Experiments to elucidate its specific function are in progress.