

Statement of Work, Requisition 6435031

Purchase of Twinstrand Duplex DNA sequencing kits

DNA sequencing kits from Twinstrand Biosciences are required for the conduct of DNA Duplex Sequencing experiments in the Mechanisms of Mutation group headed by Dr. Roel Schaaper within the Genome Integrity and Structural Biology Laboratory (GISBL). DNA Duplex sequencing is a novel technique by which mutations can be detected at very low frequencies directly in DNA without phenotypic selections. The technique requires the preparation of specialized DNA libraries in which duplex adapters are ligated to the target DNA such that the two DNA strands can be bioinformatically linked. As a consequence, analysis of mutations can be restricted to mutations found in both DNA strands, hence eliminating the artifactual mutations found in only single-stranded DNA. The entire library construction is a highly complex, multi-step procedure, but it has been optimized by Twinstrand Biosciences. The optimized kits contain all the required reagents and guarantee a high success rate. By using these kits it makes it possible for the Schaaper laboratory to conduct a number of important experiments aimed at understanding the mechanisms by which cells produce mutations.