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# SMRT Sequencing

National Cancer Institute

## Source

National Cancer Institute. *SMRT Sequencing*. NCI Thesaurus. Code C146819.

A proprietary third-generation DNA sequencing system from Pacific Biosciences that uses zero-mode waveguides (ZMWs) and phospholinked nucleotides. A single DNA polymerase enzyme is affixed at the bottom of a ZMW structure with a single molecule of DNA as a template. A fluorescent tag is cleaved off with each base addition and is detected to create the sequence.