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CRISPRi innovations provide expanded experimental options and flexibility for researchers facilitating disease & drug research

Horizon Discovery, a PerkinElmer, Inc. company, on March 29, 2021 announced that its gene editing and modulation portfolio is expanding to include a new family of CRISPR modulation (CRISPRmod) reagents for CRISPR interference (CRISPRi). CRISPRi enables scientists to better understand the biological pathways, processes and pathologies of disease by repressing genes at the transcriptional level, ultimately leading to new therapeutic approaches.

The new reagents include the first-ever commercially available synthetic single guide RNAs for CRISPRi, as well as a patent-pending, dCas9-SALL1-SDS3 repressor available in mRNA and lentiviral formats. With these new technologies, researchers will have the flexibility to repress genes in almost all cell lines, over any length of time, and at any scale from single gene readouts to high-throughput studies.

The novel dCas9-SALL1-SDS3 repressor was developed following extensive research and has shown more robust and consistent gene modulation over a longer course of time compared to current-generation CRISPRi products.

Alan Fletcher, SVP Life Sciences at PerkinElmer said, “CRISPRi is gene knockdown, not knockout. It’s CRISPR without the cut, so it offers a temporary and nuanced approach which is ideal for researchers looking to mimic cellular effects of small molecule drugs or do multiplexed gene interrogation. By offering these new reagents, in addition to our existing CRISPR options, we’re primed to aid researchers in achieving even more exciting breakthroughs in the years ahead.”

Horizon Discovery’s Dharmacon technology, with its patented siRNA tools, has been the market leader in gene modulation for more than 20 years. Since the discovery of CRISPR gene editing tools, Horizon has been on the forefront offering guide and nuclease products to enable precision DIY CRISPR knockout and knock-in as well as custom screening and cell line production services. CRISPRmod CRISPRi continues the tradition of innovation by developing novel CRISPR-based transcriptional gene modulation reagents. Portfolio-wide, Horizon helps researchers answer fundamental biological questions leading to therapeutic advancements.