Description of Additional Supplementary Data Files

File Name: Supplementary Data 1 Description: The list of 80,263 oligonucleotides that contain gRNAs and corresponding target sequences.

File Name: Supplementary Data 2

Description: gRNA indel rates of 55,604 (covering 20,211 genes), 58,167 (covering 20,315 genes) and 56,888 (covering 20,270 genes) for WT-SpCas9, eSpCas9(1.1) and SpCas9-HF1, respectively.

File Name: Supplementary Data 3 Description: Summary of all important feature information.

File Name: Supplementary Data 4 Description: Tree SHAP values for three Cas9 nucleases.

File Name: Supplementary Data 5 Description: Comparison of the log-odds score for three Cas9 nucleases.

File Name: Supplementary Data 6 Description: Performance comparison of different prediction models for WT SpCas9.

File Name: Supplementary Data 7 Description: Performance comparison of different prediction models for eSpCas9.

File Name: Supplementary Data 8 Description: Performance comparison of different prediction models for SpCas9-HF1.

File Name: Supplementary Data 9 Description: The 100 gRNAs rates of integrated targets, endogenous targets and the prediction models for WT-SpCas9, eSpCas9(1.1) and SpCas9-HF1, respectively.

File Name: Supplementary Data 10 Description: U6 expression transfer Learning without chromatin openness information and T7 expression transfer learning with chromatin openness information.

File Name: Supplementary Data 11 Description: U6 expression transfer learning with chromatin openness information.

File Name: Supplementary Data 12 Description: The performance comparison before and after incorporating the chromosome accessibility feature.

File Name: Supplementary Data 13

Description: The contribution of repetitive nucleotides to gRNA activity.

File Name: Supplementary Data 14 Description: The hyperparameters for XGBoost regression.

File Name: Supplementary Data 15 Description: The hyperparameters for MLP.

File Name: Supplementary Data 16 Description: The hyperparameters for CNN.

File Name: Supplementary Data 17 Description: The hyperparameters for RNN only.

File Name: Supplementary Data 18 Description: The hyperparameters for DeepHF.

File Name: Supplementary Data 19 Description: The raw read counts of the study.

File Name: Supplementary Data 20 Description: The primers sequence used in this study.