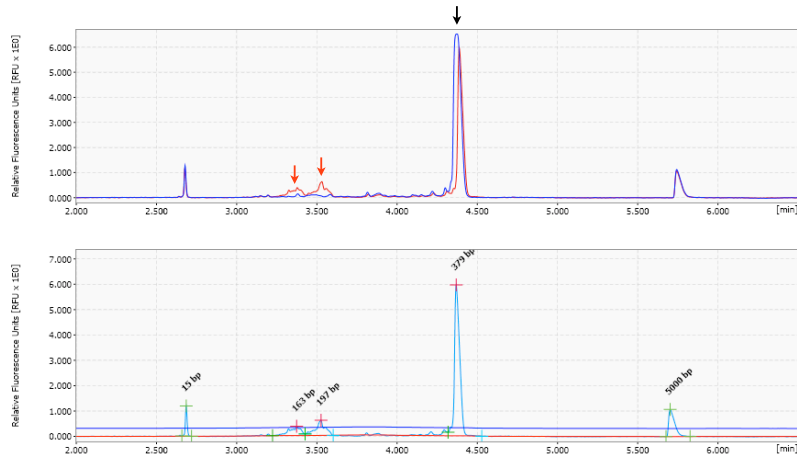


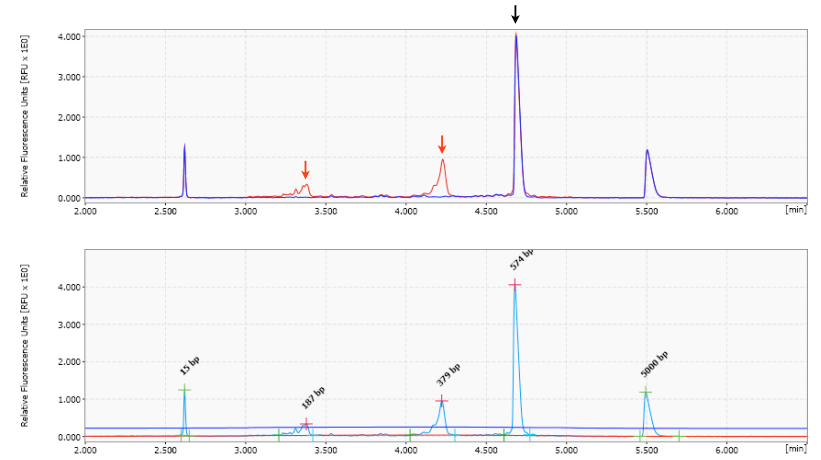
ABL1

Expected cleavage peaks: 170 bp, 203 bp
Observed cleavage peaks: 163 bp, 197 bp
Fraction cleaved: 28.5%
Estimated % NHEJ: 15.5%



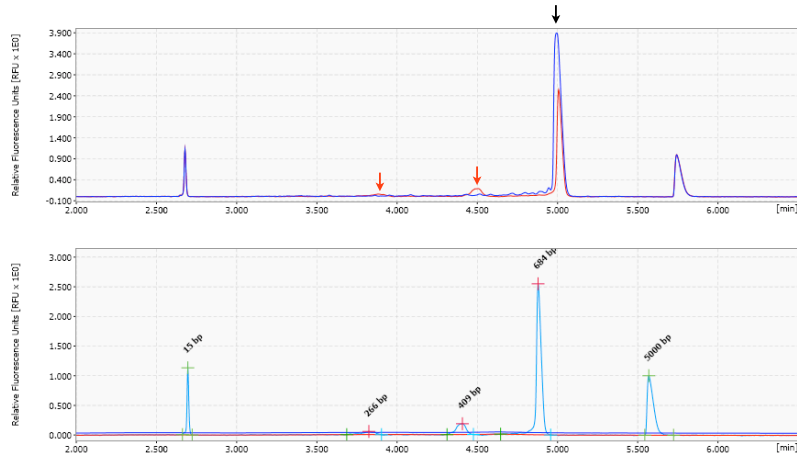
AKT2

Expected cleavage peaks: 191 bp, 377 bp
Observed cleavage peaks: 187 bp, 379 bp
Fraction cleaved: 38.2%
Estimated % NHEJ: 21.4%



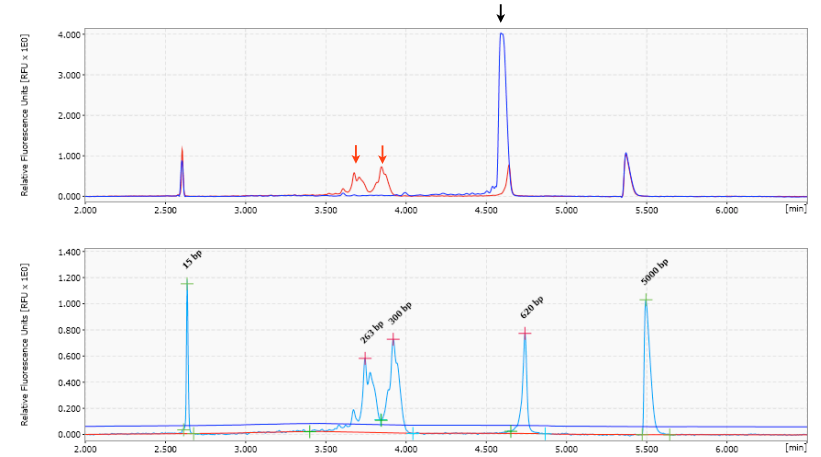
ALK

Expected cleavage peaks: 273 bp, 411 bp
Observed cleavage peaks: 266 bp, 409 bp
Fraction cleaved: 18.6%
Estimated % NHEJ: 9.8%



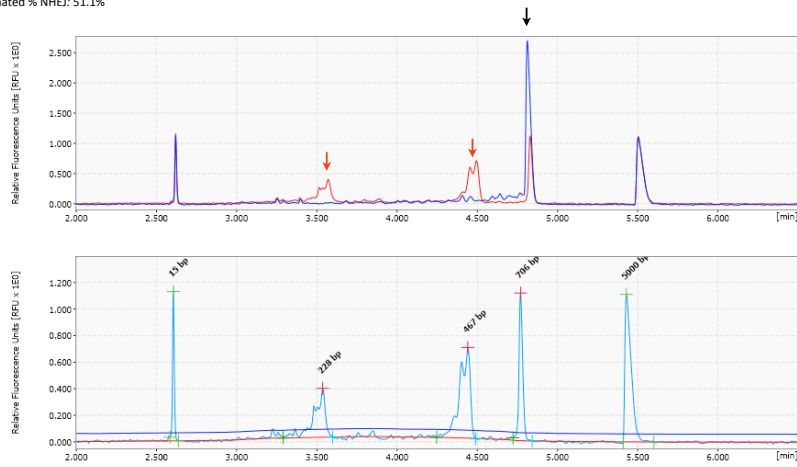
APC

Expected cleavage peaks: 272 bp, 306 bp
Observed cleavage peaks: 263 bp, 300 bp
Fraction cleaved: 82.8%
Estimated % NHEJ: 58.5%



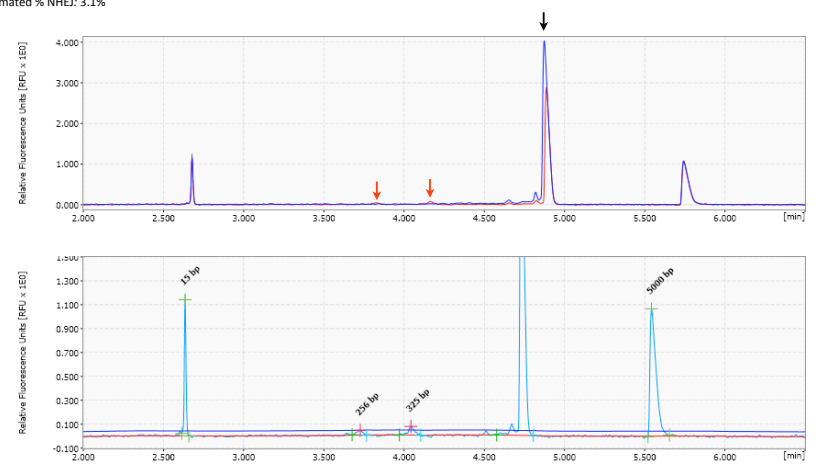
ATM

Expected cleavage peaks: 240 bp, 477 bp
Observed cleavage peaks: 228 bp, 467 bp
Fraction cleaved: 76.1%
Estimated % NHEJ: 51.1%



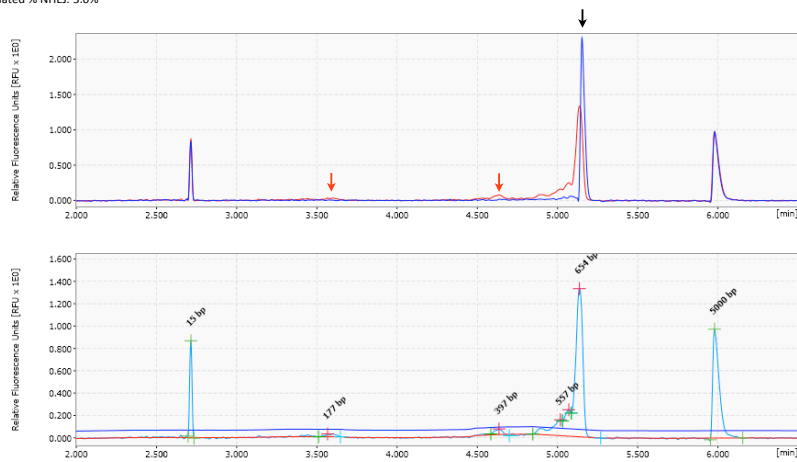
AXIN2

Expected cleavage peaks: 258 bp, 323 bp
Observed cleavage peaks: 256 bp, 325 bp
Fraction cleaved: 6.0%
Estimated % NHEJ: 3.1%



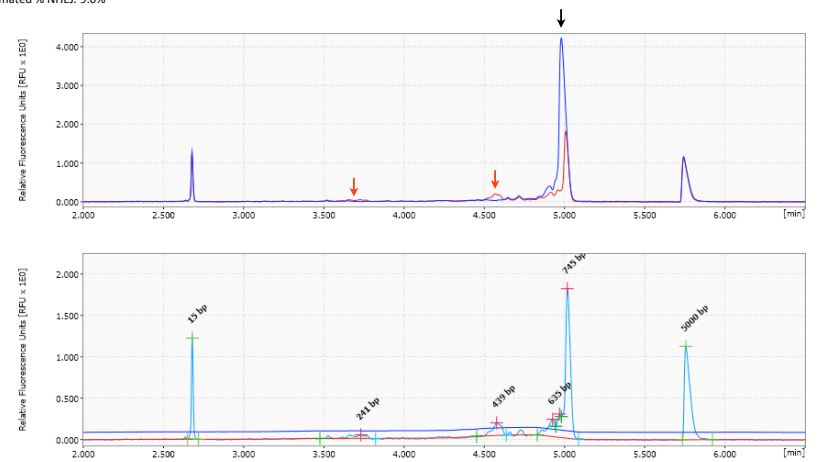
BAX

Expected cleavage peaks: 192 bp, 391 bp
Observed cleavage peaks: 177 bp, 397 bp
Fraction cleaved: 5.9%
Estimated % NHEJ: 3.0%



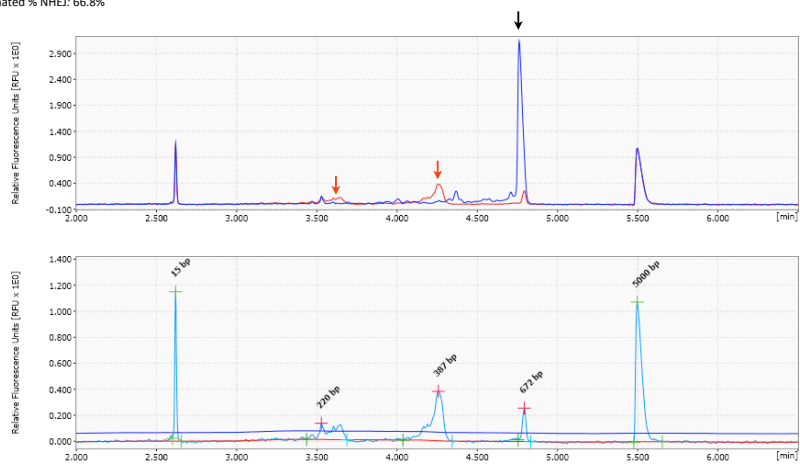
BCL6

Expected cleavage peaks: 242 bp, 433 bp
Observed cleavage peaks: 241 bp, 439 bp
Fraction cleaved: 17.2%
Estimated % NHEJ: 9.0%



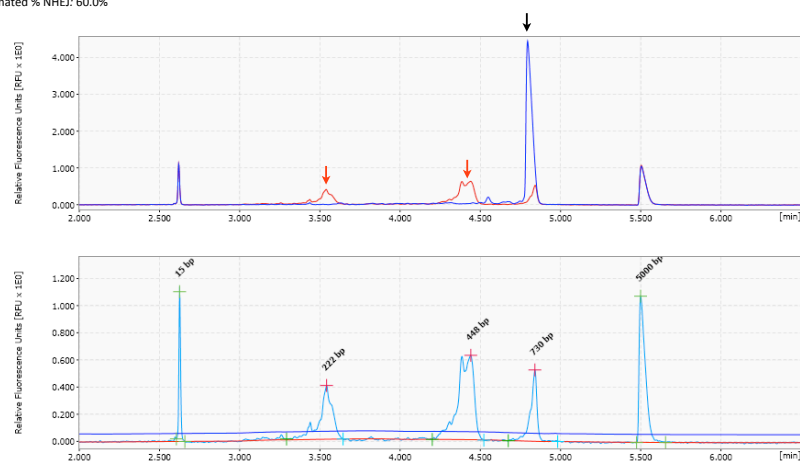
BMPR1A

Expected cleavage peaks: 250 bp, 400 bp
Observed cleavage peaks: 220 bp, 387 bp
Fraction cleaved: 89.0%
Estimated % NHEJ: 66.8%



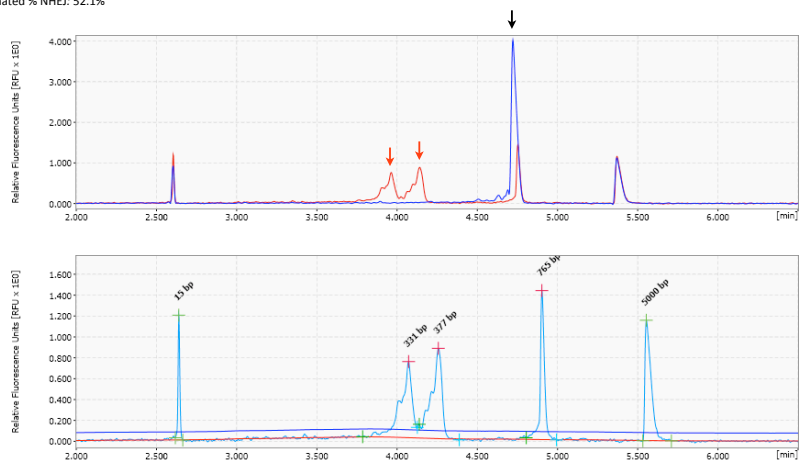
BRCA1

Expected cleavage peaks: 232 bp, 452 bp
Observed cleavage peaks: 222 bp, 448 bp
Fraction cleaved: 84.0%
Estimated % NHEJ: 60.0%



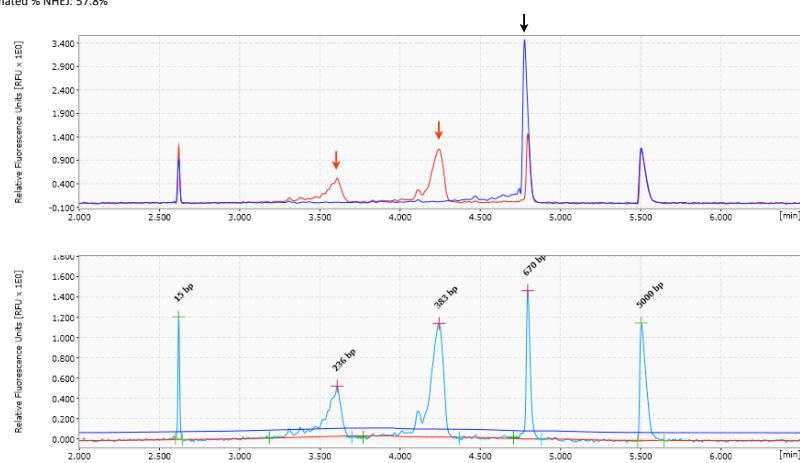
BRCA2

Expected cleavage peaks: 332 bp, 378 bp
Observed cleavage peaks: 331 bp, 377 bp
Fraction cleaved: 77.0%
Estimated % NHEJ: 52.1%



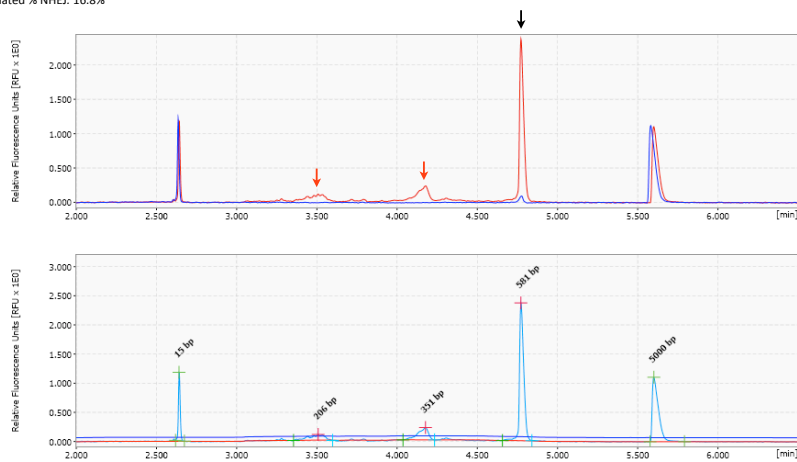
CBX3

Expected cleavage peaks: 242 bp, 392 bp
Observed cleavage peaks: 236 bp, 383 bp
Fraction cleaved: 82.2%
Estimated % NHEJ: 57.8%



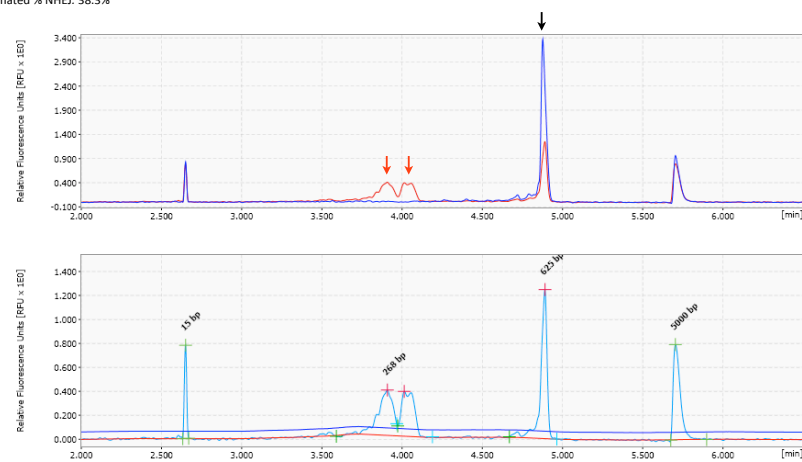
CBX8

Expected cleavage peaks: 214 bp, 343 bp
Observed cleavage peaks: 206 bp, 351 bp
Fraction cleaved: 30.8%
Estimated % NHEJ: 16.8%



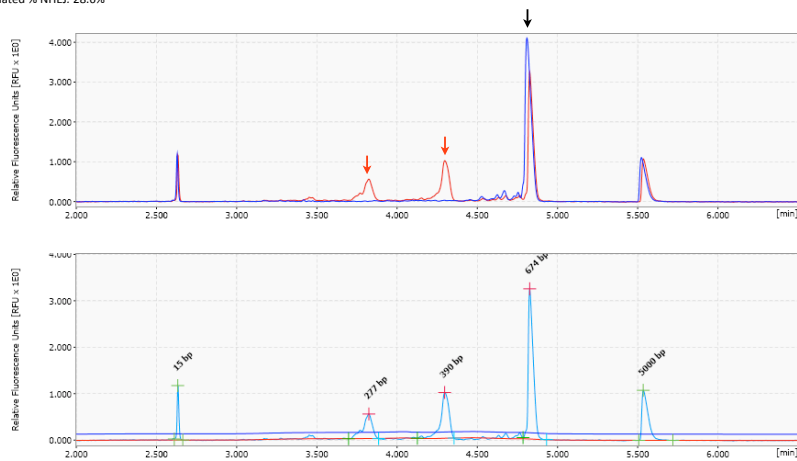
CCND1

Expected cleavage peaks: 264 bp, 290 bp
Observed cleavage peaks: 268 bp, 289 bp
Fraction cleaved: 61.9%
Estimated % NHEJ: 38.3%



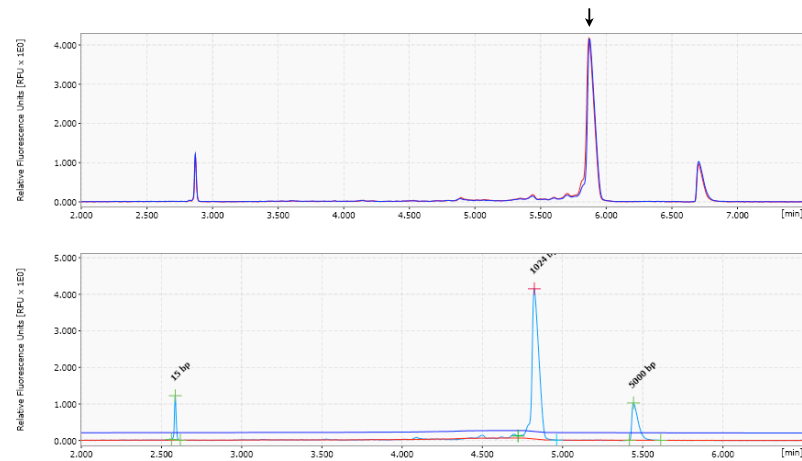
CDC73

Expected cleavage peaks: 277 bp, 397 bp
Observed cleavage peaks: 277 bp, 390 bp
Fraction cleaved: 49.0%
Estimated % NHEJ: 28.6%



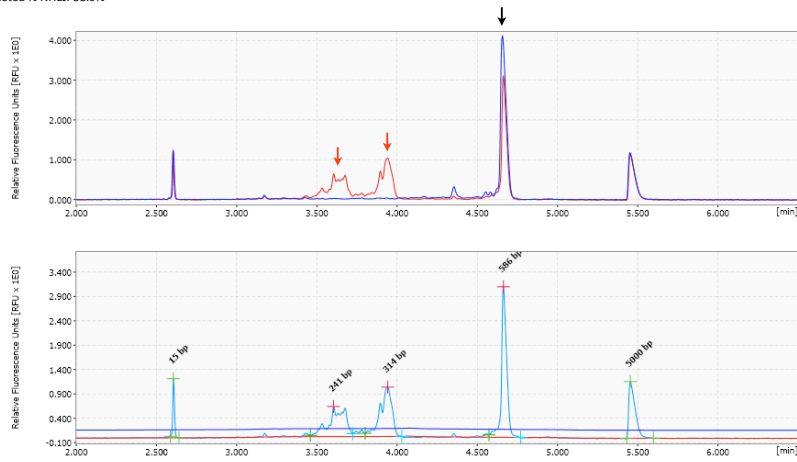
CDH1

Expected cleavage peaks: 384 bp, 427 bp
Observed cleavage peaks: none



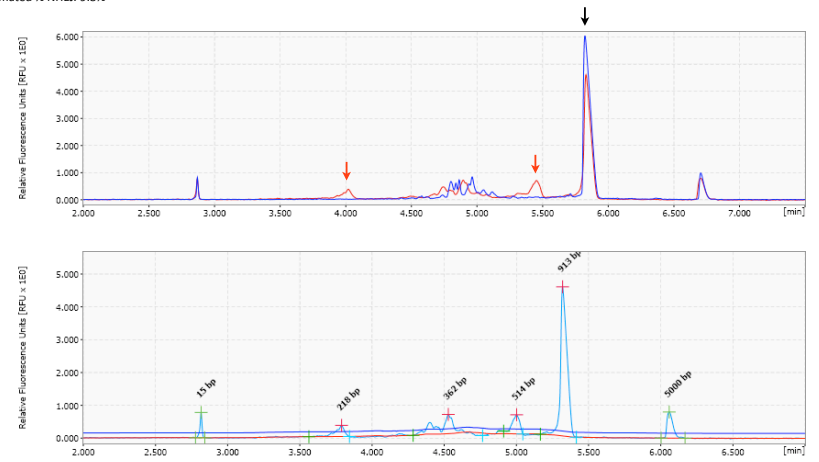
CDK4

Expected cleavage peaks: 257 bp, 320 bp
Observed cleavage peaks: 241 bp, 314 bp
Fraction cleaved: 62.7%
Estimated % NHEJ: 38.9%



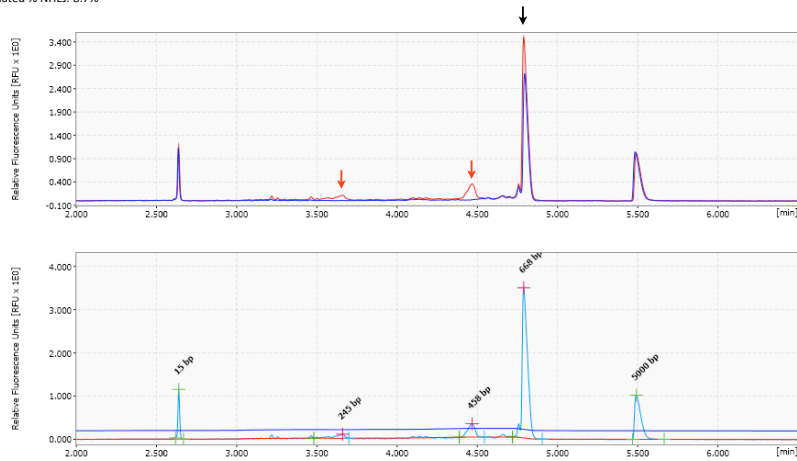
CHD4

Expected cleavage peaks: 200 bp, 461 bp
Observed cleavage peaks: 218 bp, 514 bp
Fraction cleaved: 18.6%
Estimated % NHEJ: 9.8%



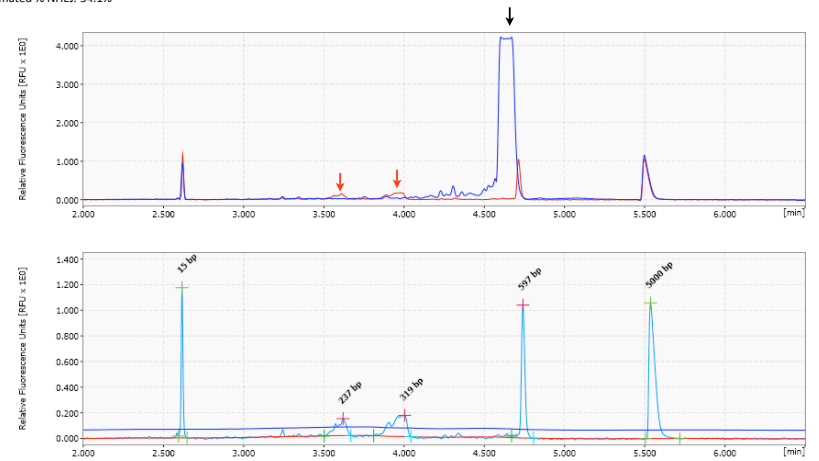
CHD7

Expected cleavage peaks: 252 bp, 464 bp
Observed cleavage peaks: 245 bp, 458 bp
Fraction cleaved: 16.7%
Estimated % NHEJ: 8.7%



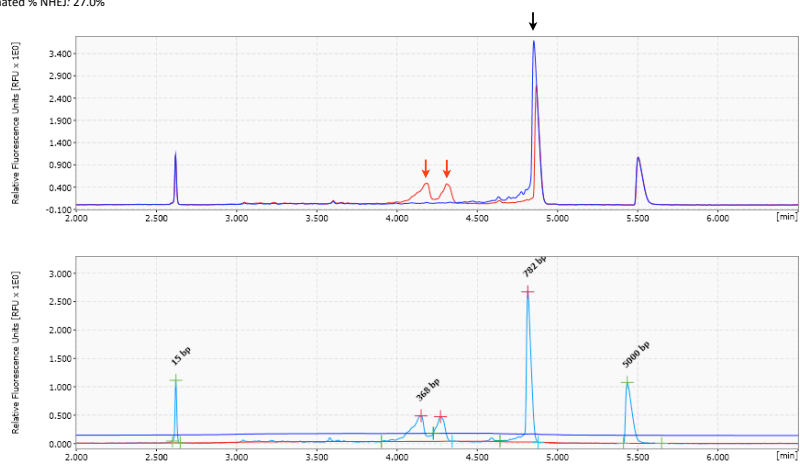
CTNNB1

Expected cleavage peaks: 241 bp, 318 bp
Observed cleavage peaks: 237 bp, 319 bp
Fraction cleaved: 56.6%
Estimated % NHEJ: 34.1%



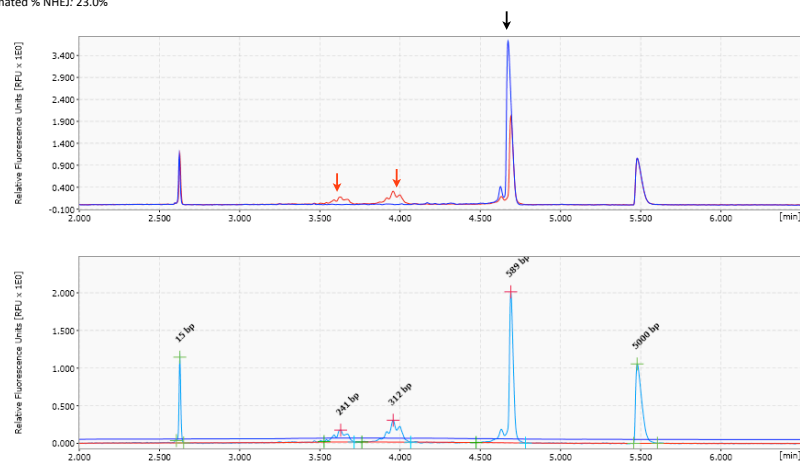
CYLD

Expected cleavage peaks: 370 bp, 411 bp
Observed cleavage peaks: 368 bp, 399 bp
Fraction cleaved: 46.7%
Estimated % NHEJ: 27.0%



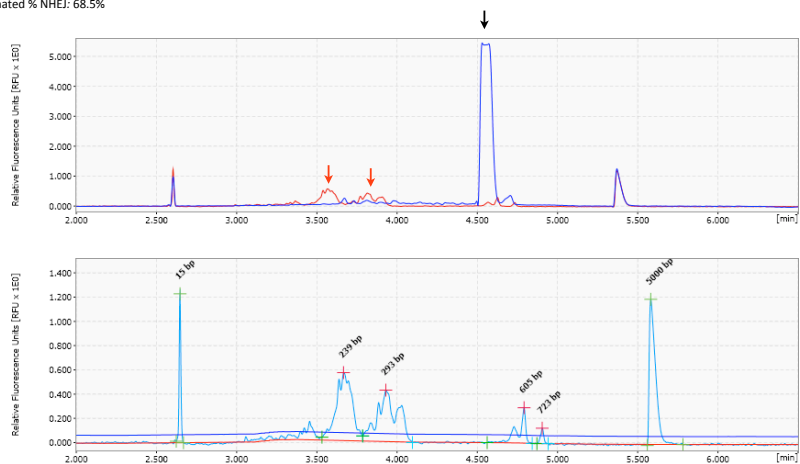
DDB2

Expected cleavage peaks: 252 bp, 320 bp
Observed cleavage peaks: 241 bp, 312 bp
Fraction cleaved: 40.7%
Estimated % NHEJ: 23.0%



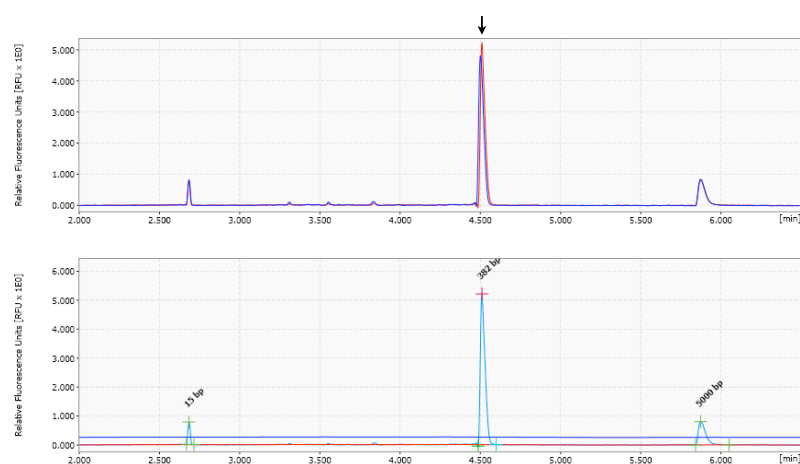
ERCC2

Expected cleavage peaks: 250 bp, 312 bp
Observed cleavage peaks: 239 bp, 293 bp
Fraction cleaved: 90.1%
Estimated % NHEJ: 68.5%



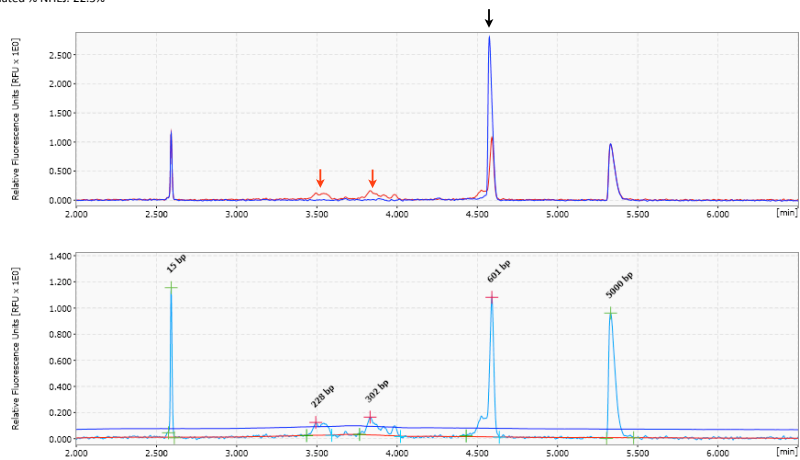
ERCC5

Expected cleavage peaks: 101 bp, 261 bp
Observed cleavage peaks: none



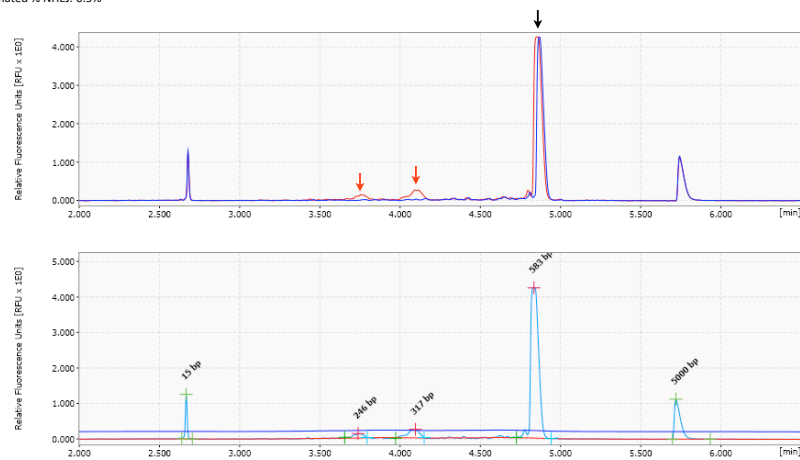
EWSR1

Expected cleavage peaks: 243 bp, 334 bp
Observed cleavage peaks: 228 bp, 302 bp
Fraction cleaved: 40.0%
Estimated % NHEJ: 22.5%



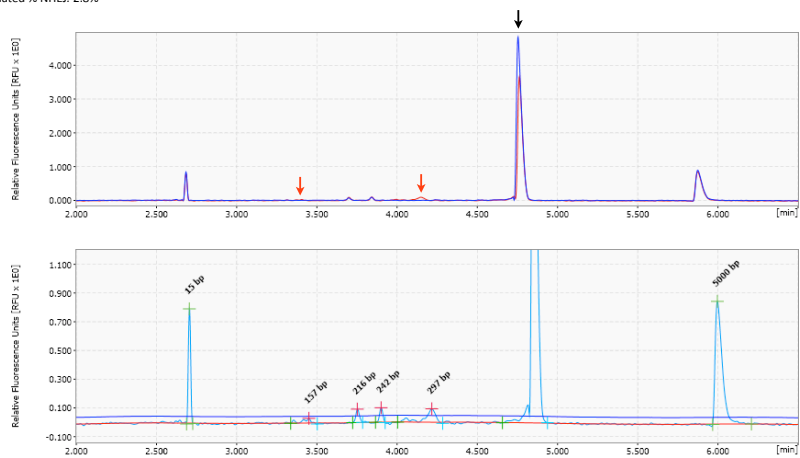
EXT1

Expected cleavage peaks: 242 bp, 310 bp
Observed cleavage peaks: 246 bp, 317 bp
Fraction cleaved: 12.6%
Estimated % NHEJ: 6.5%



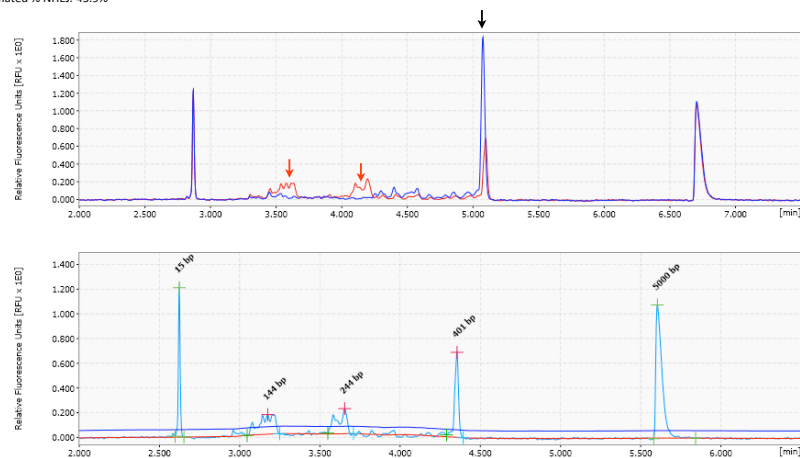
EXT2

Expected cleavage peaks: 148 bp, 288 bp
Observed cleavage peaks: 157 bp, 297 bp
Fraction cleaved: 5.5%
Estimated % NHEJ: 2.8%



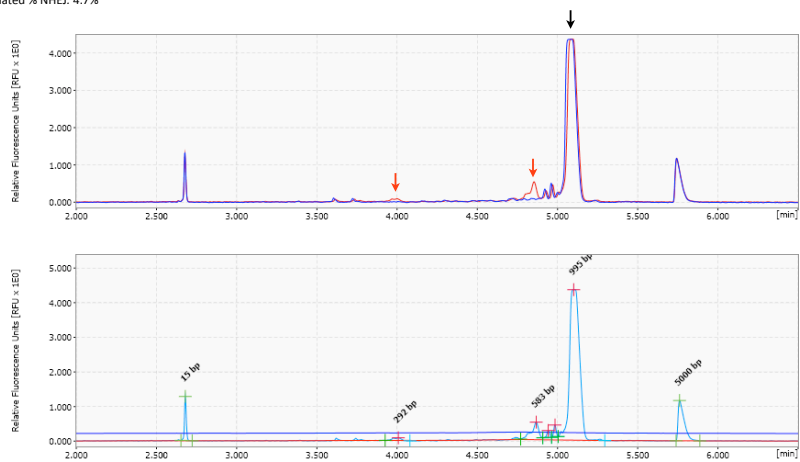
EZH2

Expected cleavage peaks: 146 bp, 235 bp
Observed cleavage peaks: 144 bp, 244 bp
Fraction cleaved: 68.5%
Estimated % NHEJ: 43.9%



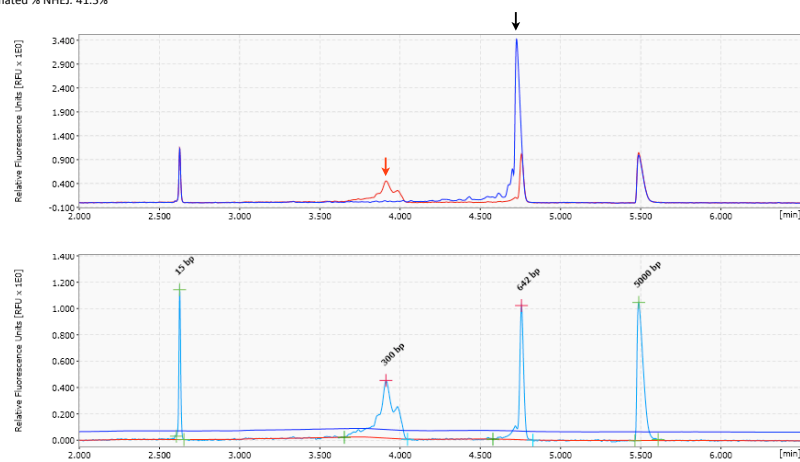
FANCA

Expected cleavage peaks: 281 bp, 528 bp
Observed cleavage peaks: 292 bp, 583 bp
Fraction cleaved: 9.3%
Estimated % NHEJ: 4.7%



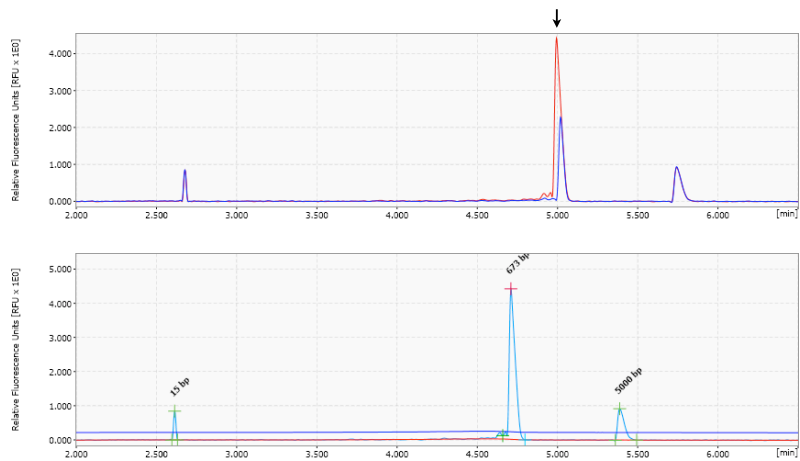
FANCC

Expected cleavage peaks: 308 bp, 323 bp
Observed cleavage peaks: 300 bp
Fraction cleaved: 65.8%
Estimated % NHEJ: 41.5%



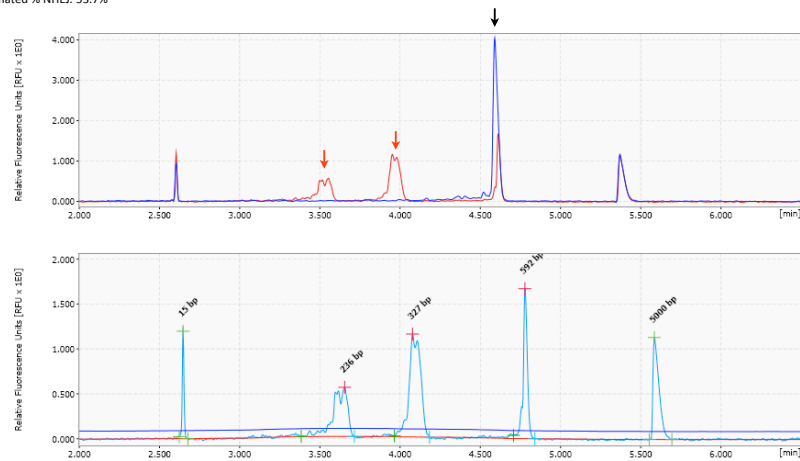
FANCE

Expected cleavage peaks: 309 bp, 356 bp
Observed cleavage peaks: none



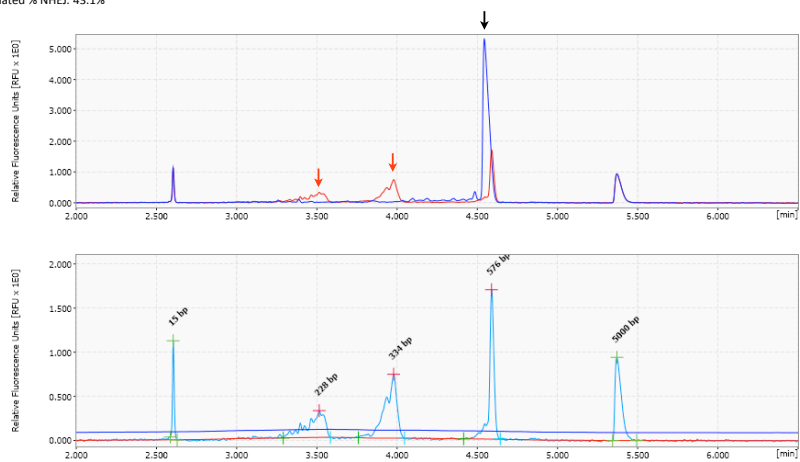
FANCF

Expected cleavage peaks: 239 bp, 336 bp
Observed cleavage peaks: 236 bp, 327 bp
Fraction cleaved: 78.5%
Estimated % NHEJ: 53.7%



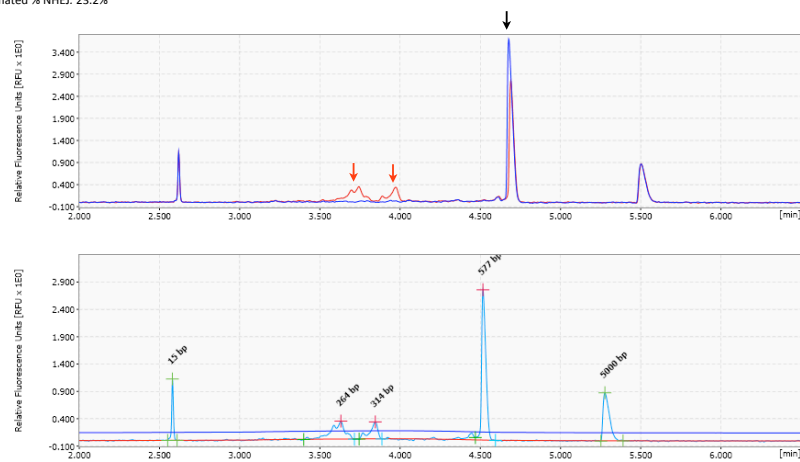
FANCG

Expected cleavage peaks: 230 bp, 332 bp
Observed cleavage peaks: 228 bp, 334 bp
Fraction cleaved: 67.6%
Estimated % NHEJ: 43.1%



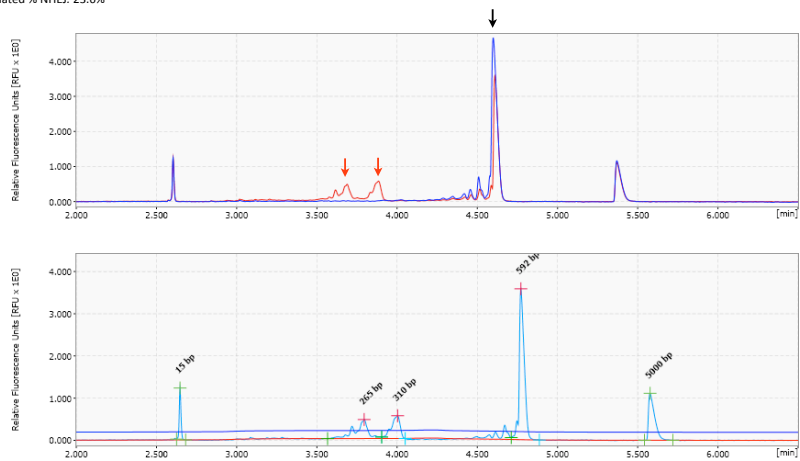
FES

Expected cleavage peaks: 262 bp, 313 bp
Observed cleavage peaks: 264 bp, 314 bp
Fraction cleaved: 41.0%
Estimated % NHEJ: 23.2%



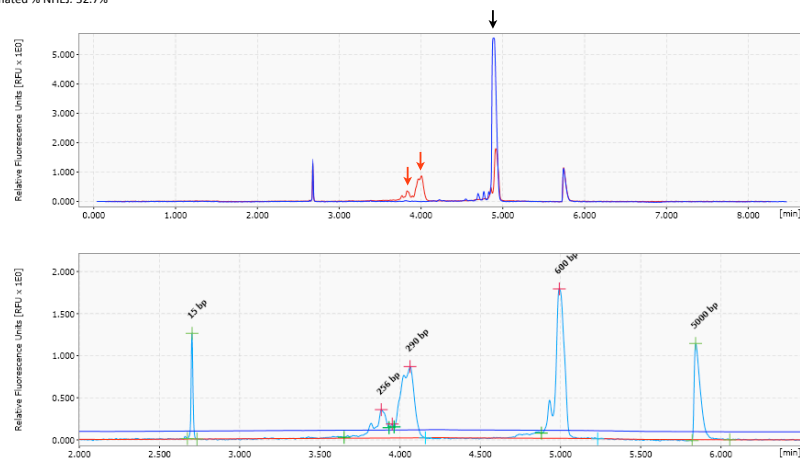
FGFR1

Expected cleavage peaks: 267 bp, 308 bp
Observed cleavage peaks: 265 bp, 310 bp
Fraction cleaved: 41.7%
Estimated % NHEJ: 23.6%



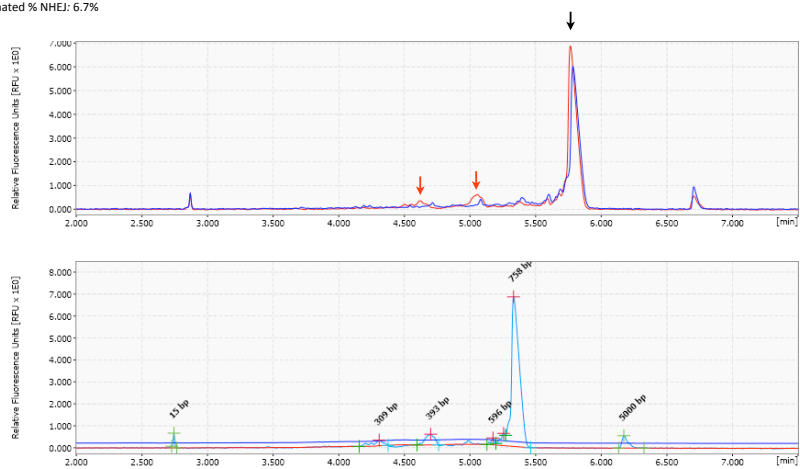
FH

Expected cleavage peaks: 285 bp, 292 bp
Observed cleavage peaks: 256 bp, 290 bp
Fraction cleaved: 54.7%
Estimated % NHEJ: 32.7%



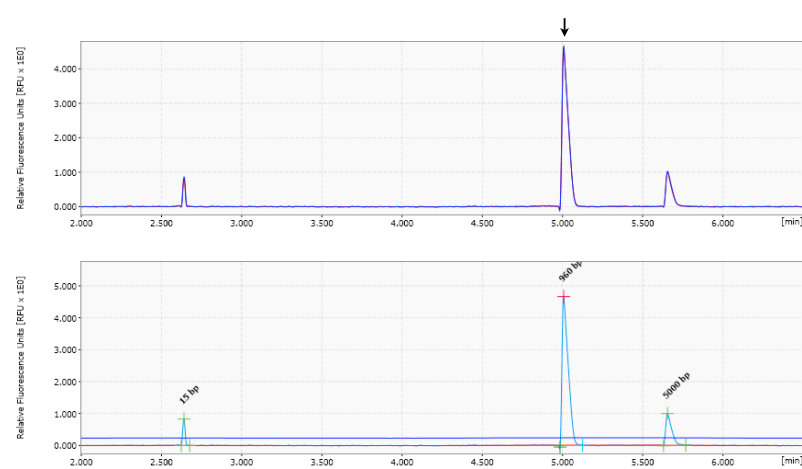
FLCN

Expected cleavage peaks: 283 bp, 374 bp
Observed cleavage peaks: 309 bp, 393 bp
Fraction cleaved: 13.0%
Estimated % NHEJ: 6.7%



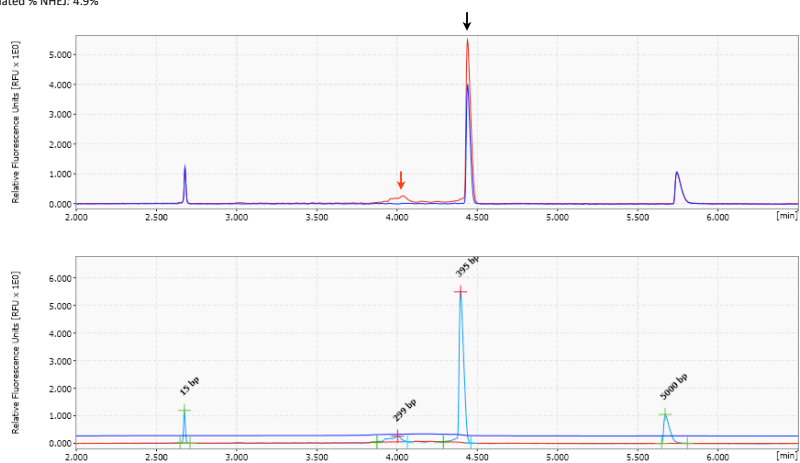
FLT3

Expected cleavage peaks: 359 bp, 449 bp
Observed cleavage peaks: none



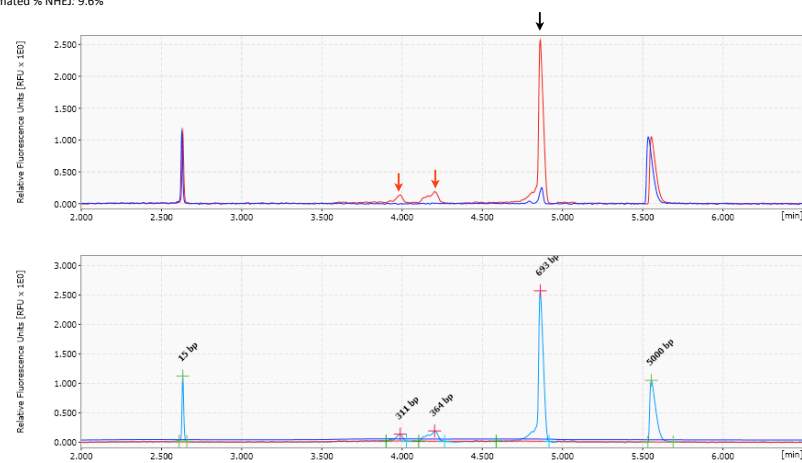
FLT4

Expected cleavage peaks: 85 bp, 284 bp
Observed cleavage peaks: 299 bp
Fraction cleaved: 9.6%
Estimated % NHEJ: 4.9%



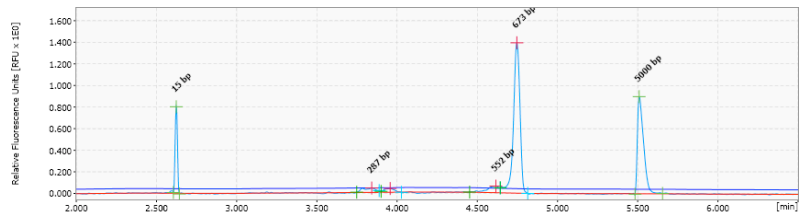
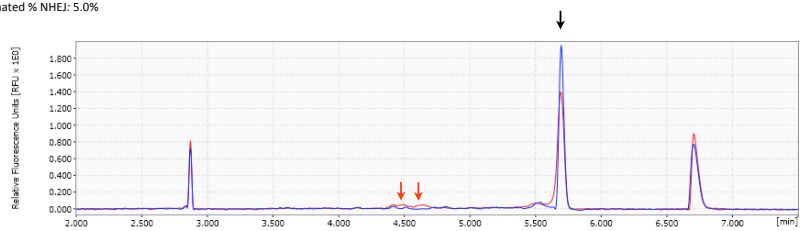
FOXO1

Expected cleavage peaks: 307 bp, 358 bp
Observed cleavage peaks: 311 bp, 364 bp
Fraction cleaved: 18.2%
Estimated % NHEJ: 9.6%



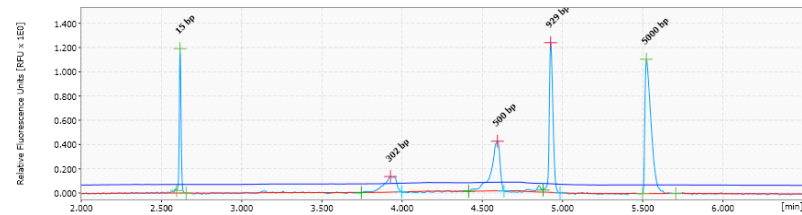
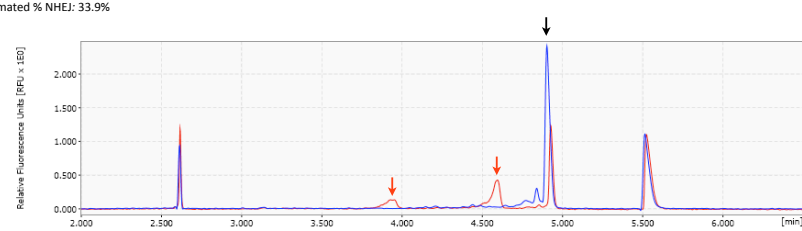
FOXO3

Expected cleavage peaks: 277 bp, 305 bp
Observed cleavage peaks: 287 bp, 313 bp
Fraction cleaved: 9.7%
Estimated % NHEJ: 5.0%



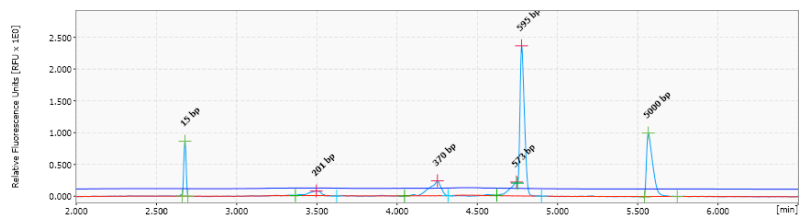
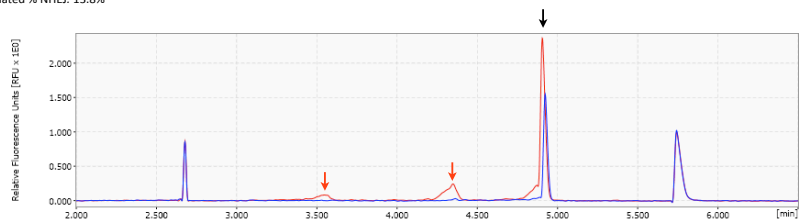
GLI1

Expected cleavage peaks: 308 bp, 504 bp
Observed cleavage peaks: 302 bp, 500 bp
Fraction cleaved: 56.3%
Estimated % NHEJ: 33.9%



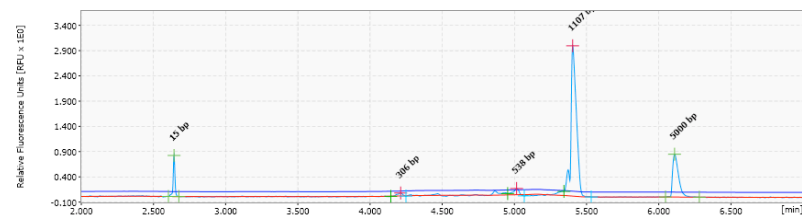
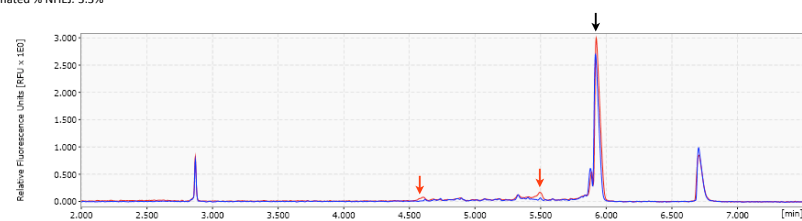
HDAC1

Expected cleavage peaks: 209 bp, 372 bp
Observed cleavage peaks: 201 bp, 370 bp
Fraction cleaved: 25.6%
Estimated % NHEJ: 13.8%



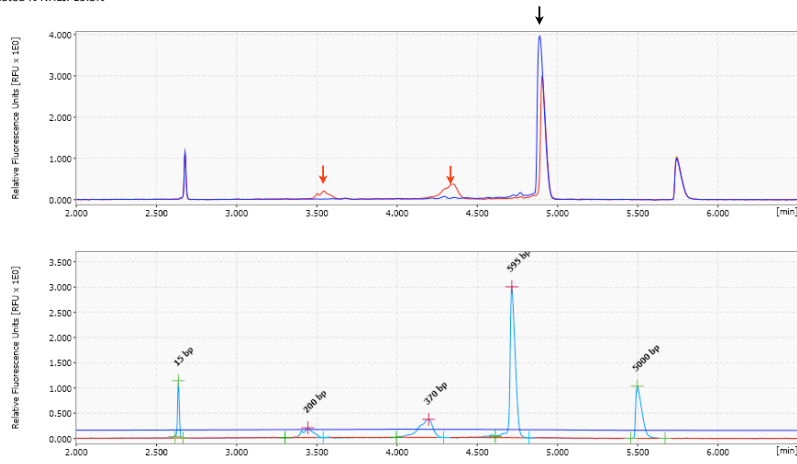
HDAC2

Expected cleavage peaks: 274 bp, 466 bp
Observed cleavage peaks: 306 bp, 538 bp
Fraction cleaved: 6.5%
Estimated % NHEJ: 3.3%



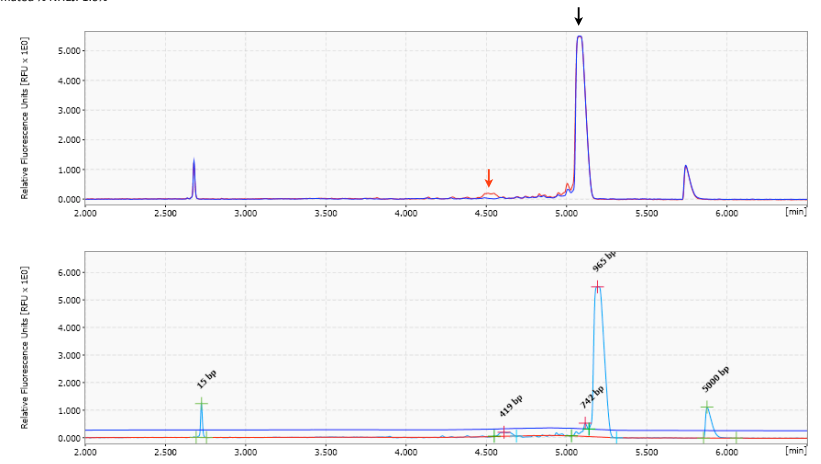
HDAC6

Expected cleavage peaks: 213 bp, 371 bp
Observed cleavage peaks: 200 bp, 370 bp
Fraction cleaved: 34.9%
Estimated % NHEJ: 19.3%



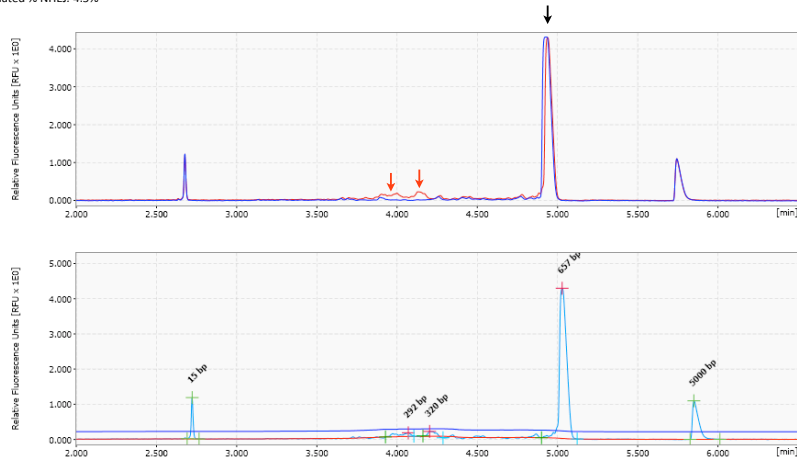
HMGA2

Expected cleavage peaks: 406 bp, 408 bp
Observed cleavage peaks: 419 bp
Fraction cleaved: 3.1%
Estimated % NHEJ: 1.6%



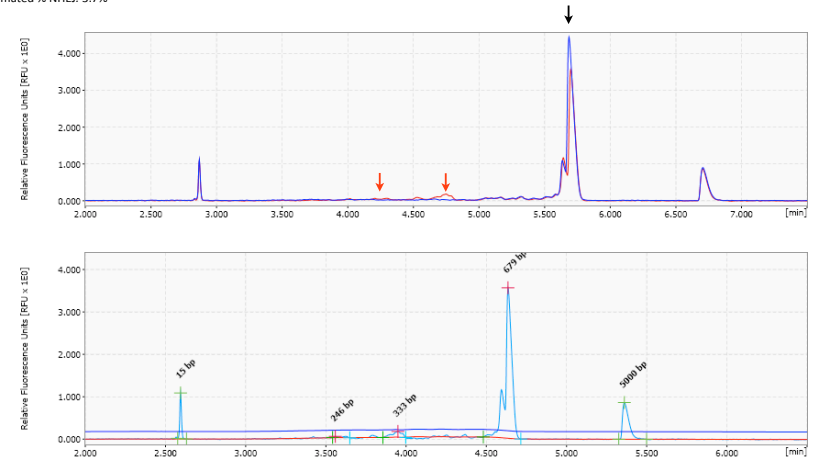
HOXA13

Expected cleavage peaks: 283 bp, 313 bp
Observed cleavage peaks: 292 bp, 320 bp
Fraction cleaved: 8.8%
Estimated % NHEJ: 4.5%



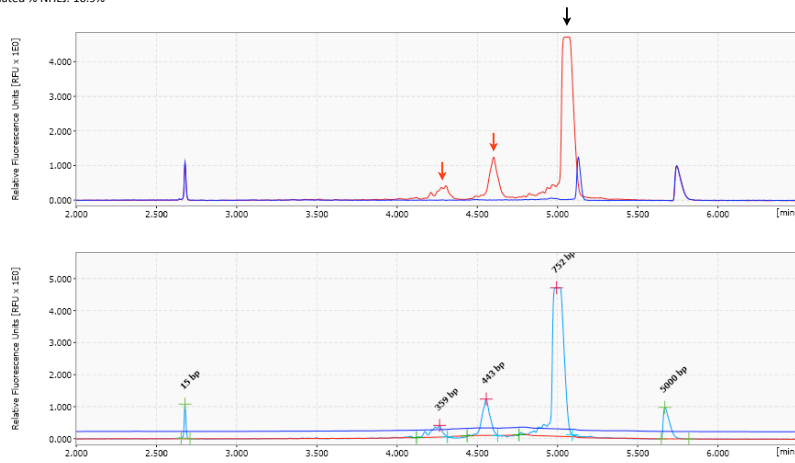
HOXA9

Expected cleavage peaks: 283 bp, 318 bp
Observed cleavage peaks: 246 bp, 333 bp
Fraction cleaved: 7.2%
Estimated % NHEJ: 3.7%



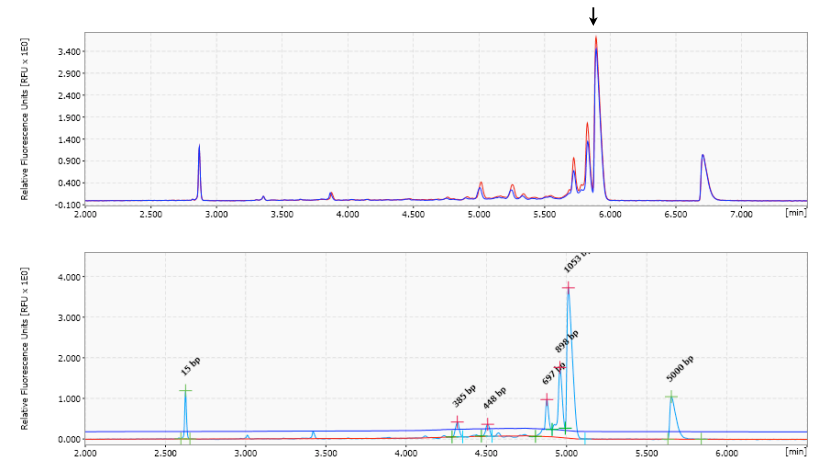
HOXC13

Expected cleavage peaks: 346 bp, 439 bp
Observed cleavage peaks: 359 bp, 443 bp
Fraction cleaved: 20.6%
Estimated % NHEJ: 10.9%



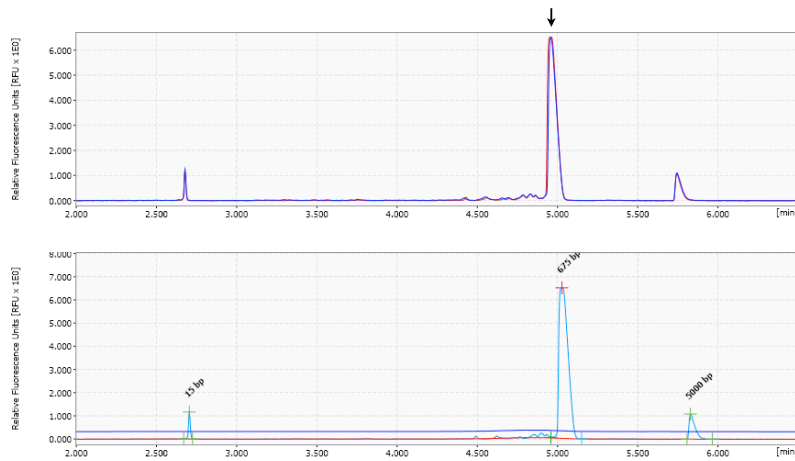
HOXD11

Expected cleavage peaks: 315 bp, 463 bp
Observed cleavage peaks: none



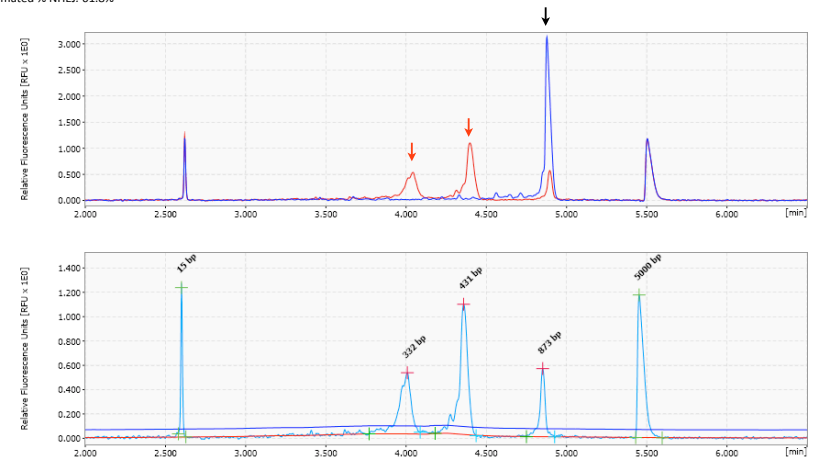
HOXD13

Expected cleavage peaks: 264 bp, 376 bp
Observed cleavage peaks: none



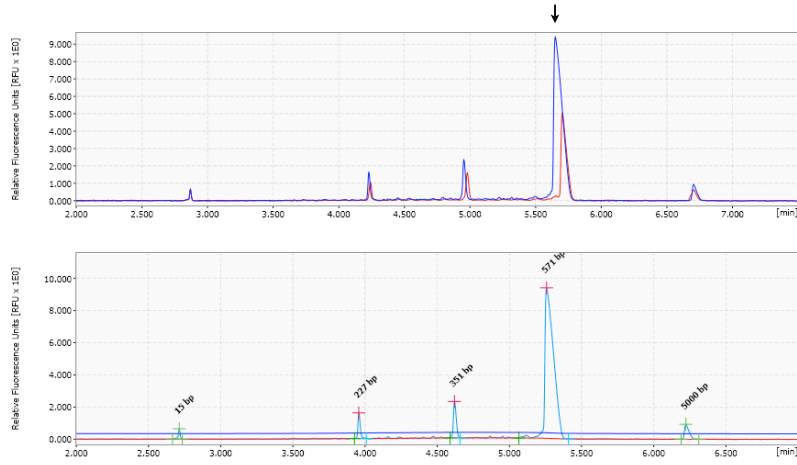
JAK2

Expected cleavage peaks: 334 bp, 441 bp
Observed cleavage peaks: 332 bp, 431 bp
Fraction cleaved: 85.4%
Estimated % NHEJ: 61.8%



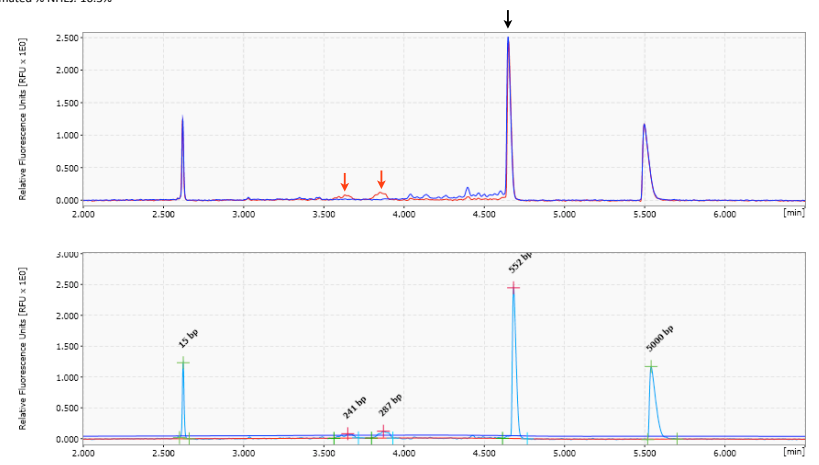
KIT

Expected cleavage peaks: 235 bp, 316 bp
Observed cleavage peaks: none



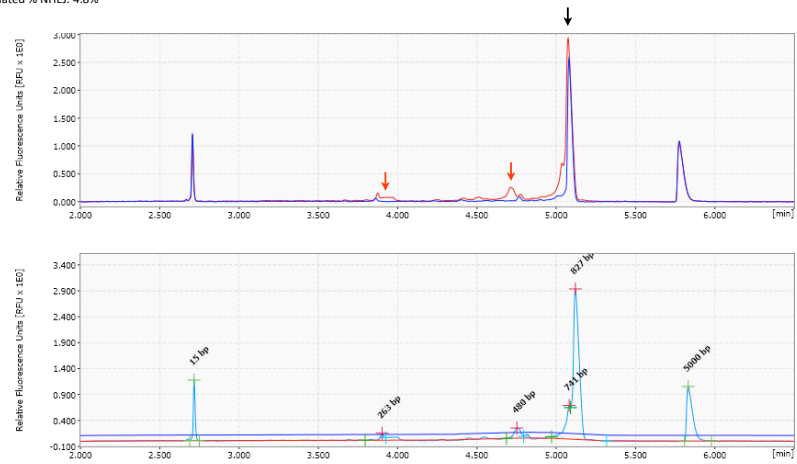
KRAS

Expected cleavage peaks: 245 bp, 297 bp
Observed cleavage peaks: 241 bp, 287 bp
Fraction cleaved: 19.6%
Estimated % NHEJ: 10.3%



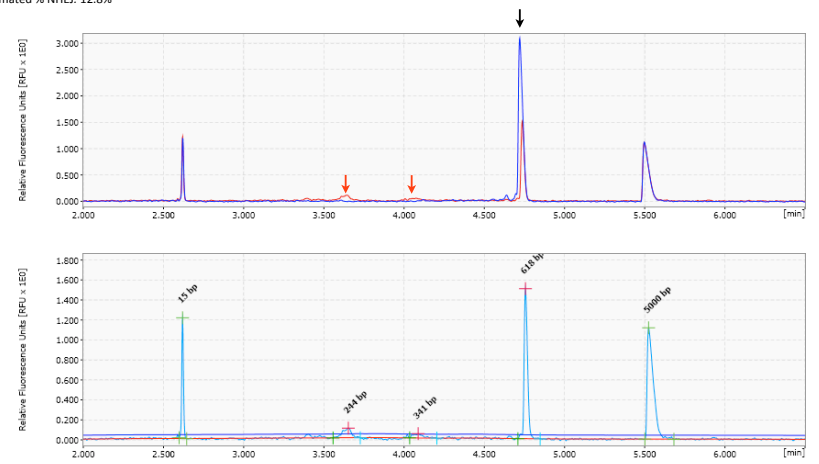
MAP2K4

Expected cleavage peaks: 268 bp, 468 bp
Observed cleavage peaks: 263 bp, 480 bp
Fraction cleaved: 9.5%
Estimated % NHEJ: 4.8%



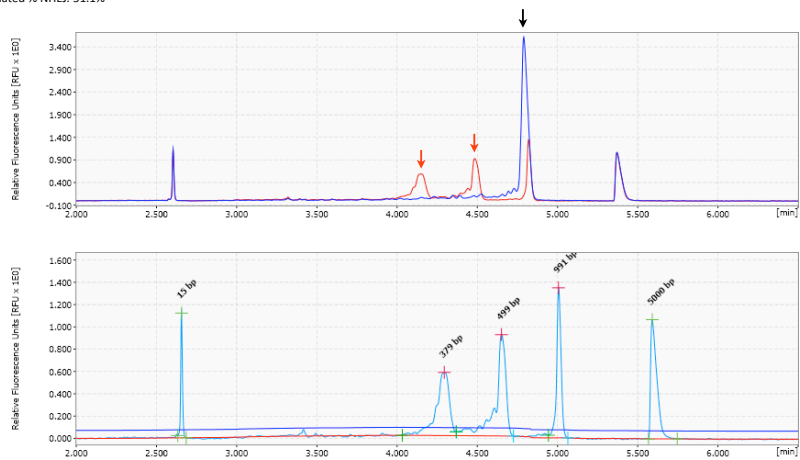
MDM2

Expected cleavage peaks: 246 bp, 336 bp
Observed cleavage peaks: 244 bp, 341 bp
Fraction cleaved: 23.9%
Estimated % NHEJ: 12.8%



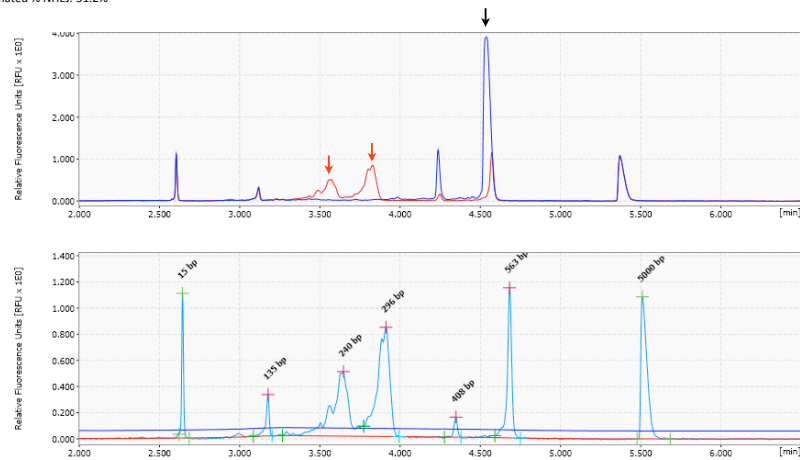
MET

Expected cleavage peaks: 383 bp, 526 bp
Observed cleavage peaks: 379 bp, 499 bp
Fraction cleaved: 76.1%
Estimated % NHEJ: 51.1%



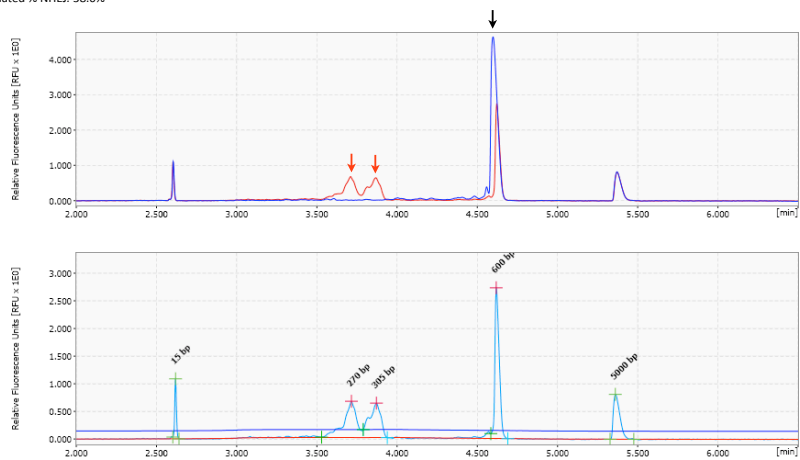
MLH1

Expected cleavage peaks: 247 bp, 299 bp
Observed cleavage peaks: 240 bp, 296 bp
Fraction cleaved: 76.2%
Estimated % NHEJ: 51.2%



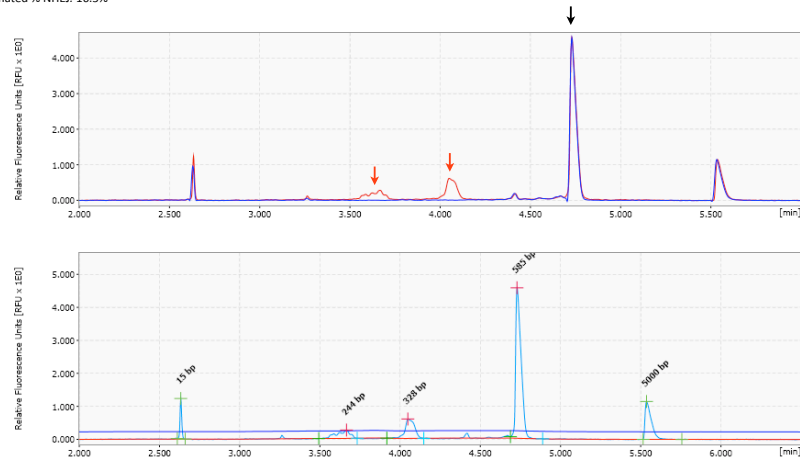
MSH2

Expected cleavage peaks: 269 bp, 301 bp
Observed cleavage peaks: 270 bp, 305 bp
Fraction cleaved: 61.5%
Estimated % NHEJ: 38.0%



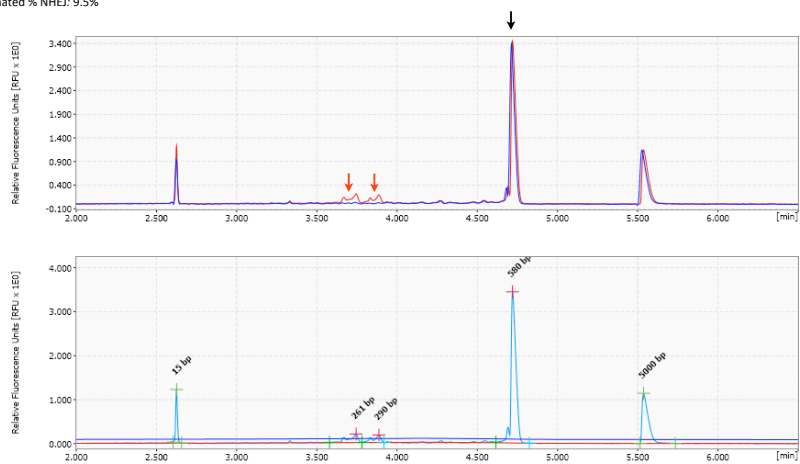
MUTYH

Expected cleavage peaks: 246 bp, 332 bp
Observed cleavage peaks: 244 bp, 328 bp
Fraction cleaved: 30.2%
Estimated % NHEJ: 16.5%



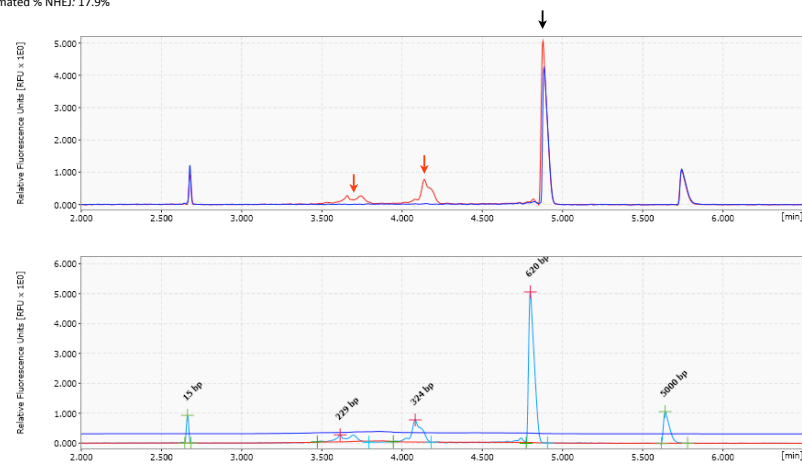
MYC

Expected cleavage peaks: 260 bp, 295 bp
Observed cleavage peaks: 261 bp, 290 bp
Fraction cleaved: 17.8%
Estimated % NHEJ: 9.5%



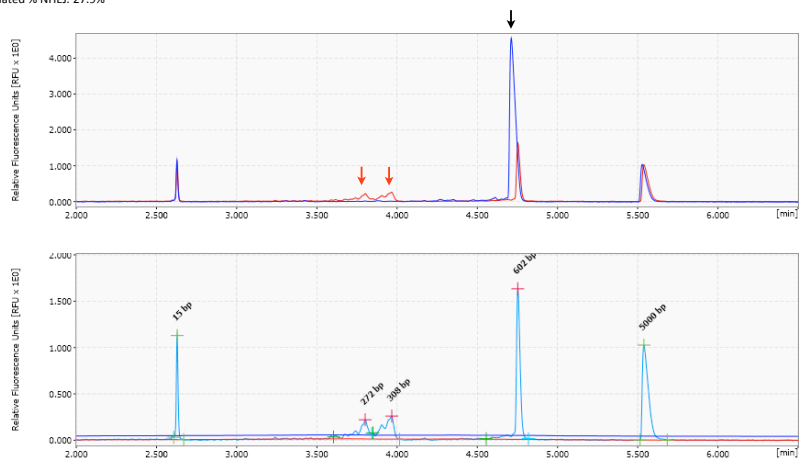
MYCL1

Expected cleavage peaks: 235 bp, 320 bp
Observed cleavage peaks: 229 bp, 324 bp
Fraction cleaved: 32.6%
Estimated % NHEJ: 17.9%



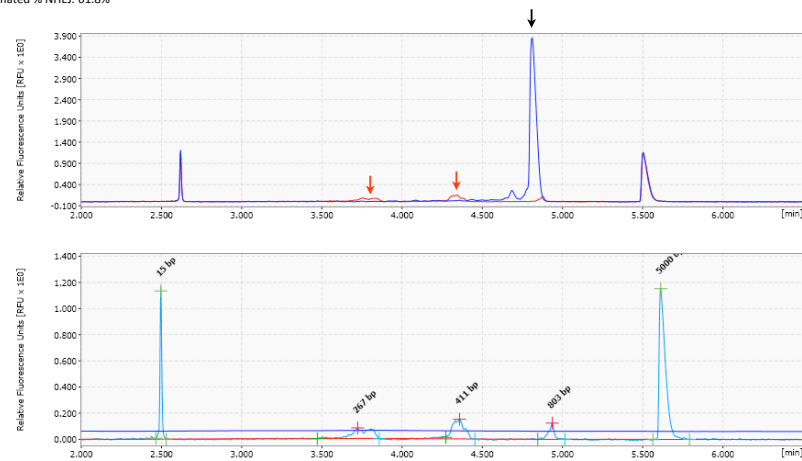
MYCN

Expected cleavage peaks: 270 bp, 306 bp
Observed cleavage peaks: 272 bp, 308 bp
Fraction cleaved: 48.1%
Estimated % NHEJ: 27.9%



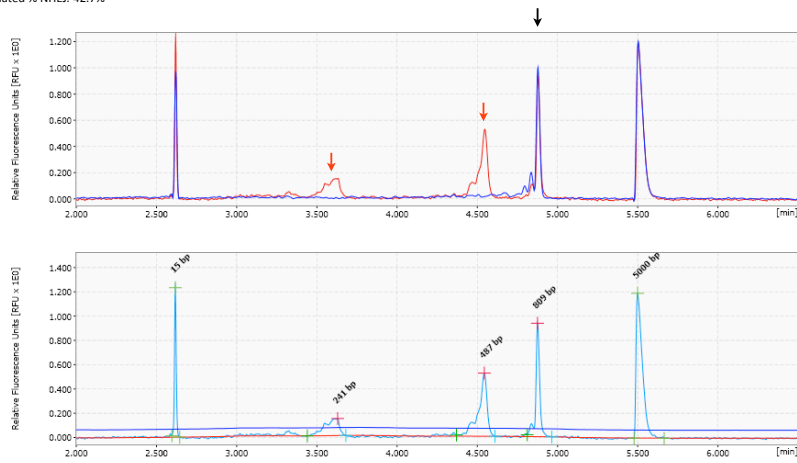
NBN

Expected cleavage peaks: 272 bp, 399 bp
Observed cleavage peaks: 267 bp, 411 bp
Fraction cleaved: 85.4%
Estimated % NHEJ: 61.8%



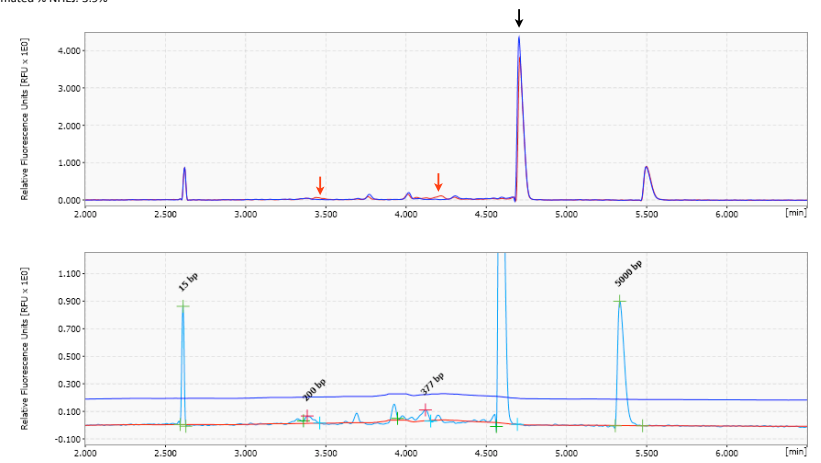
NCOR1

Expected cleavage peaks: 241 bp, 486 bp
Observed cleavage peaks: 241 bp, 487 bp
Fraction cleaved: 67.2%
Estimated % NHEJ: 42.7%



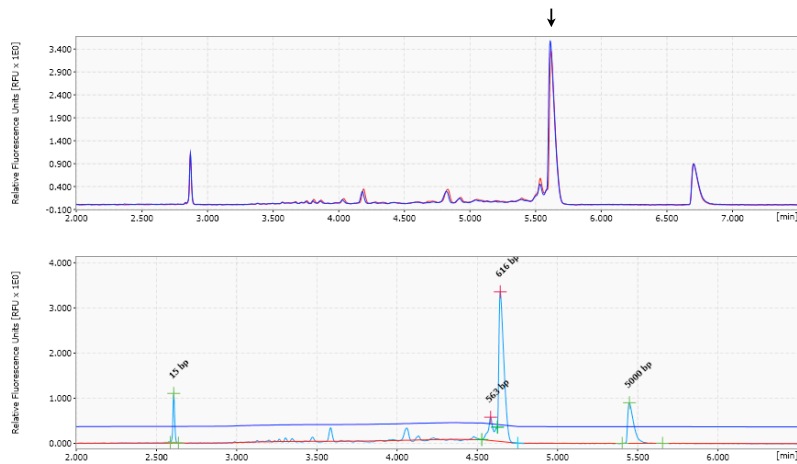
NCOR2

Expected cleavage peaks: 212 bp, 372 bp
Observed cleavage peaks: 200 bp, 377 bp
Fraction cleaved: 7.6%
Estimated % NHEJ: 3.9%



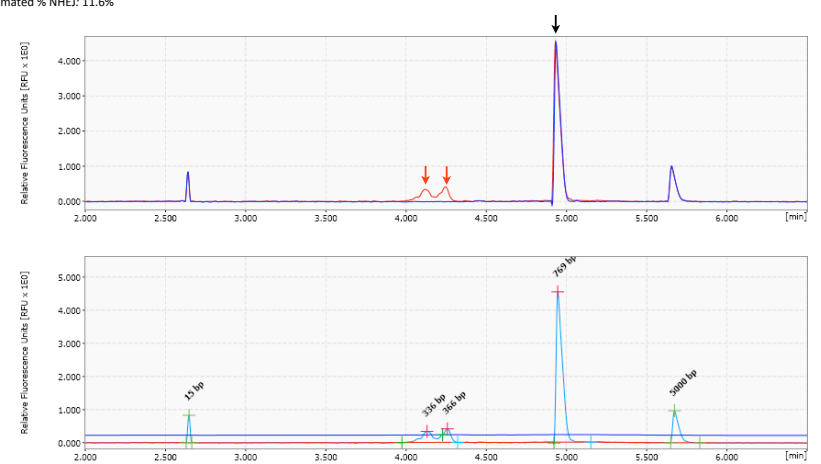
NTRK1

Expected cleavage peaks: 258 bp, 309 bp
Observed cleavage peaks: none



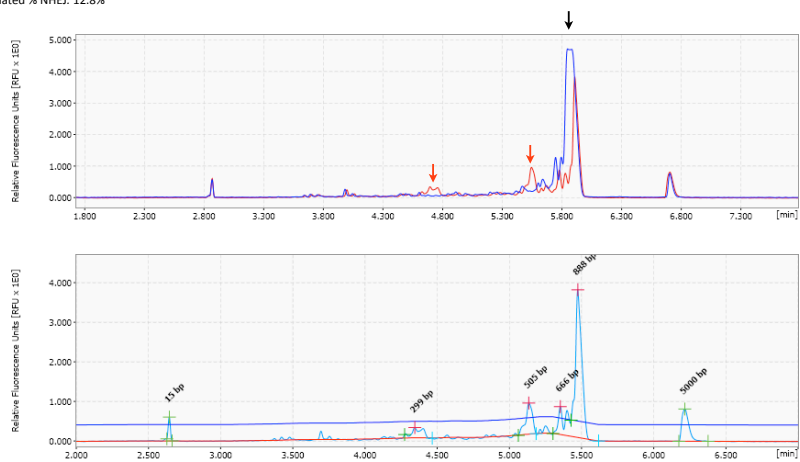
PDGFRA

Expected cleavage peaks: 321 bp, 349 bp
Observed cleavage peaks: 336 bp, 366 bp
Fraction cleaved: 21.9%
Estimated % NHEJ: 11.6%



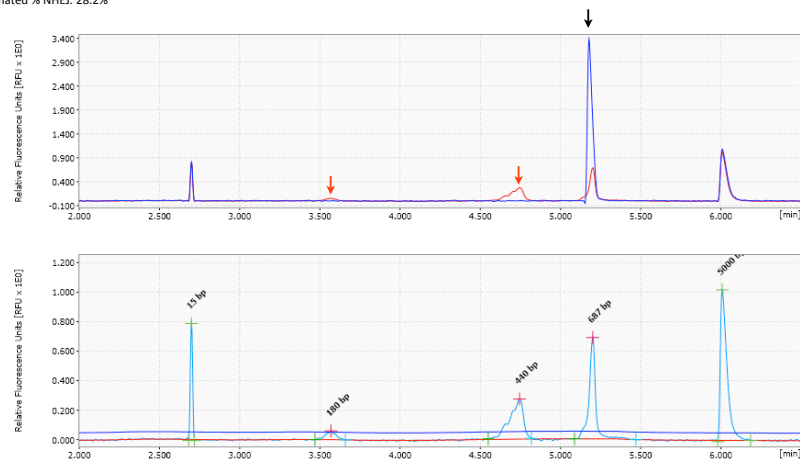
PDGFRB

Expected cleavage peaks: 300 bp, 501 bp
Observed cleavage peaks: 299 bp, 505 bp
Fraction cleaved: 23.9%
Estimated % NHEJ: 12.8%



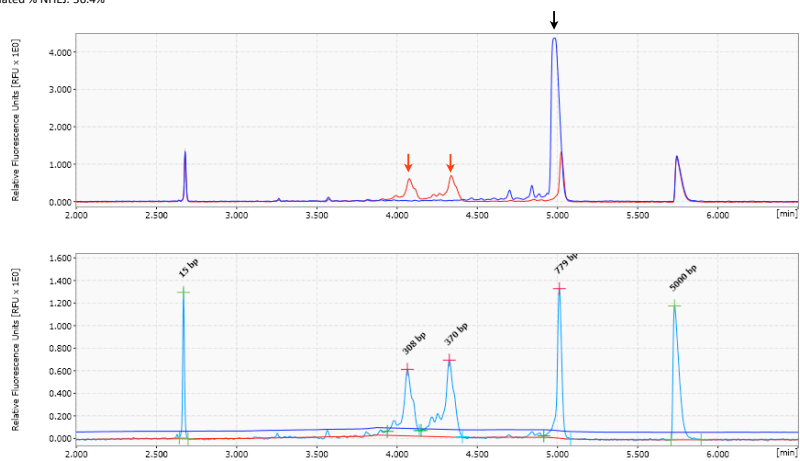
PHF8

Expected cleavage peaks: 177 bp, 428 bp
Observed cleavage peaks: 180 bp, 440 bp
Fraction cleaved: 48.5%
Estimated % NHEJ: 28.2%



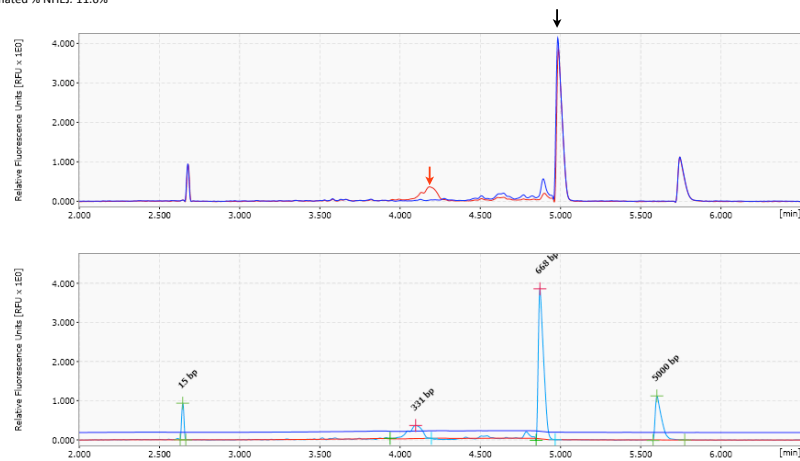
PMS2

Expected cleavage peaks: 307 bp, 367 bp
Observed cleavage peaks: 308 bp, 370 bp
Fraction cleaved: 59.5%
Estimated % NHEJ: 36.4%



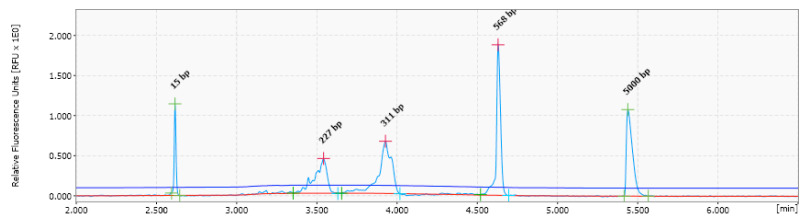
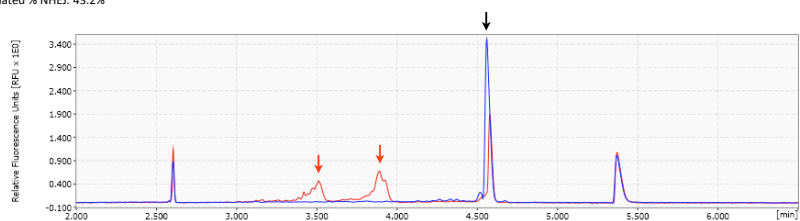
PTCH1

Expected cleavage peaks: 324 bp, 335 bp
Observed cleavage peaks: 331 bp
Fraction cleaved: 21.9%
Estimated % NHEJ: 11.6%



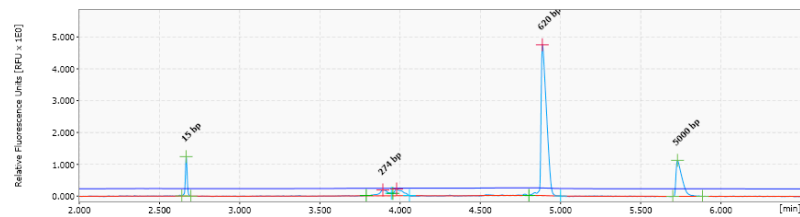
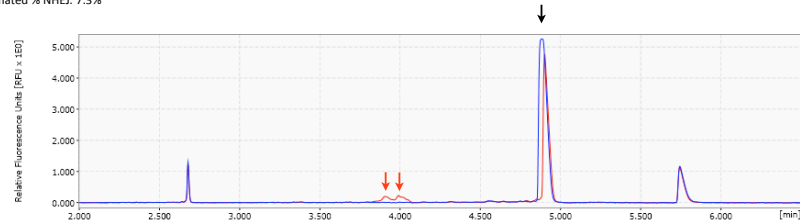
PTEN

Expected cleavage peaks: 233 bp, 320 bp
Observed cleavage peaks: 227 bp, 311 bp
Fraction cleaved: 67.8%
Estimated % NHEJ: 43.2%



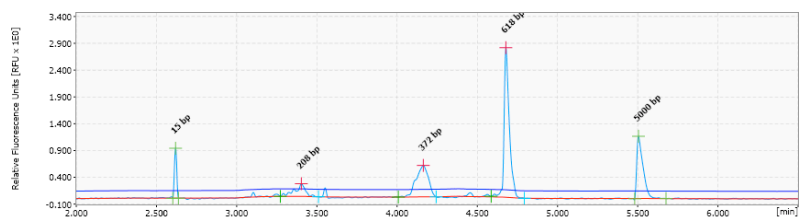
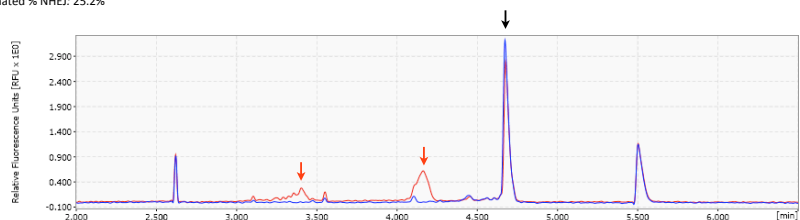
RARA

Expected cleavage peaks: 285 bp, 289 bp
Observed cleavage peaks: 274 bp, 290 bp
Fraction cleaved: 14.0%
Estimated % NHEJ: 7.3%



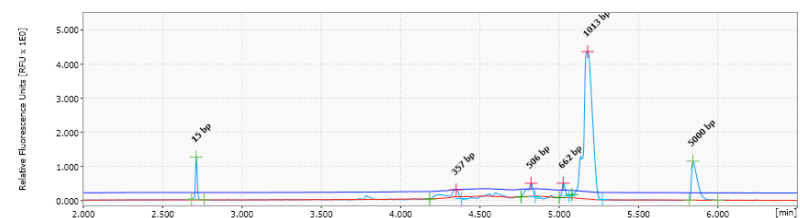
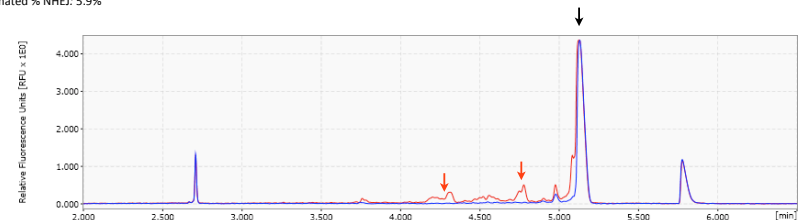
RBBP5

Expected cleavage peaks: 203 bp, 370 bp
Observed cleavage peaks: 208 bp, 372 bp
Fraction cleaved: 44.0%
Estimated % NHEJ: 25.2%



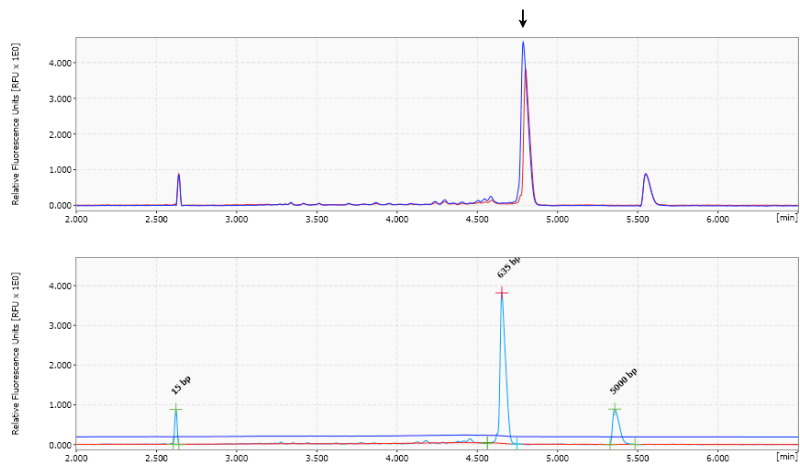
RECQL4

Expected cleavage peaks: 339 bp, 477 bp
Observed cleavage peaks: 357 bp, 506 bp
Fraction cleaved: 11.4%
Estimated % NHEJ: 5.9%



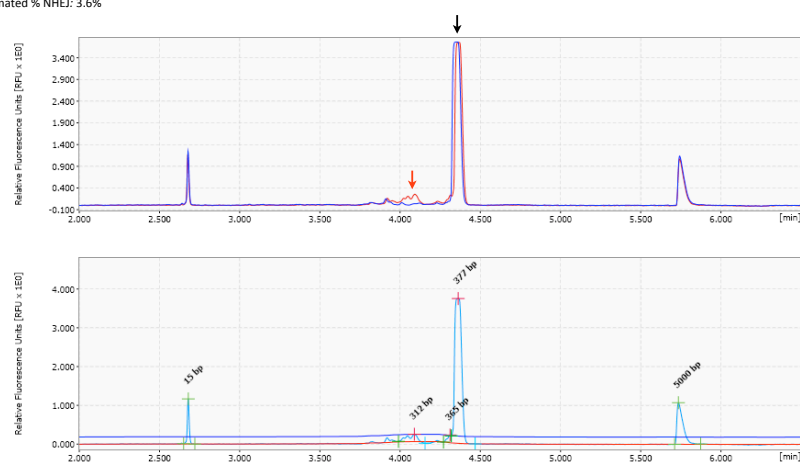
REST

Expected cleavage peaks: 269 bp, 413 bp
Observed cleavage peaks: *none*



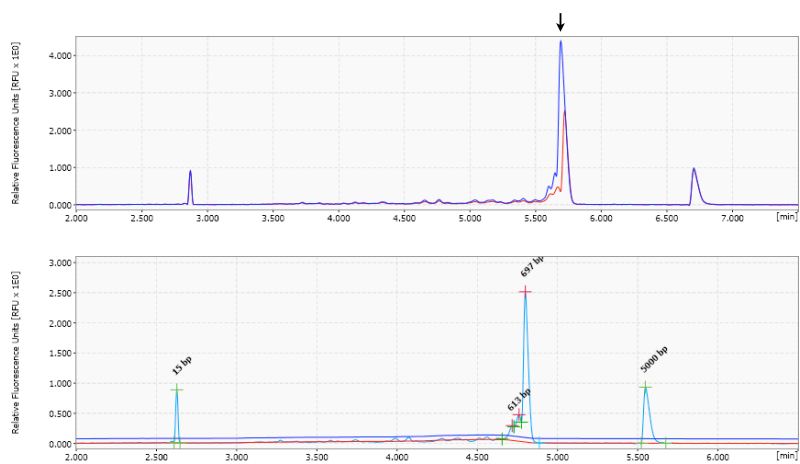
RET

Expected cleavage peaks: 299 bp, 58 bp
Observed cleavage peaks: 312 bp
Fraction cleaved: 7.1%
Estimated % NHEJ: 3.6%



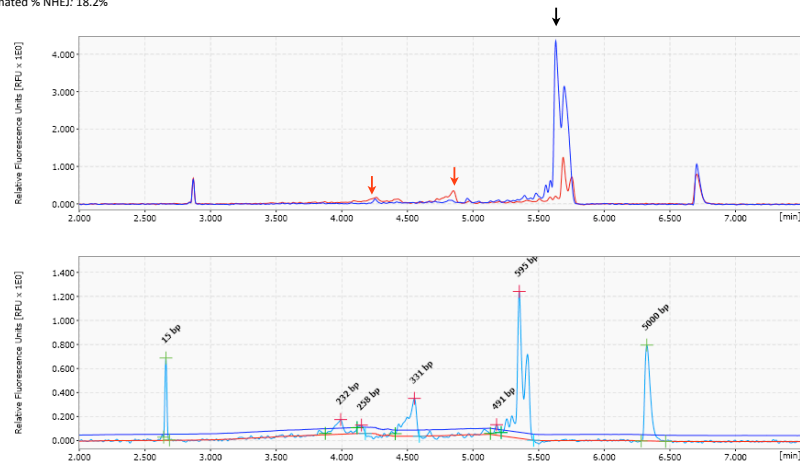
RNF2

Expected cleavage peaks: 213 bp, 429 bp
Observed cleavage peaks: *none*



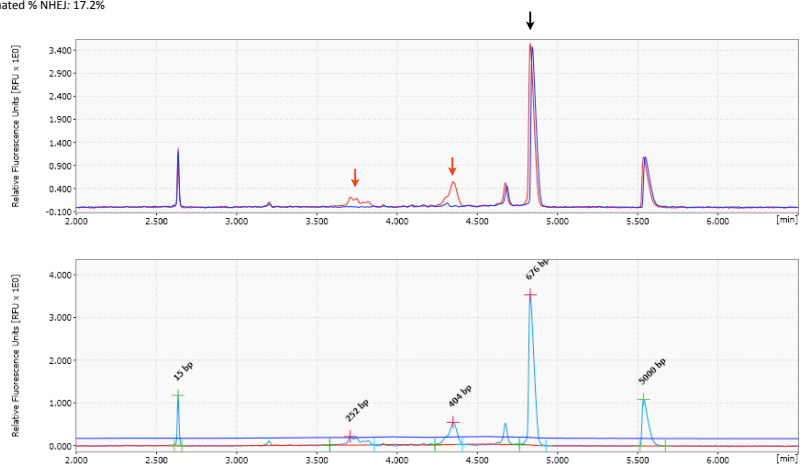
RUNX1

Expected cleavage peaks: 249 bp, 318 bp
Observed cleavage peaks: 232 bp, 331 bp
Fraction cleaved: 33.1%
Estimated % NHEJ: 18.2%



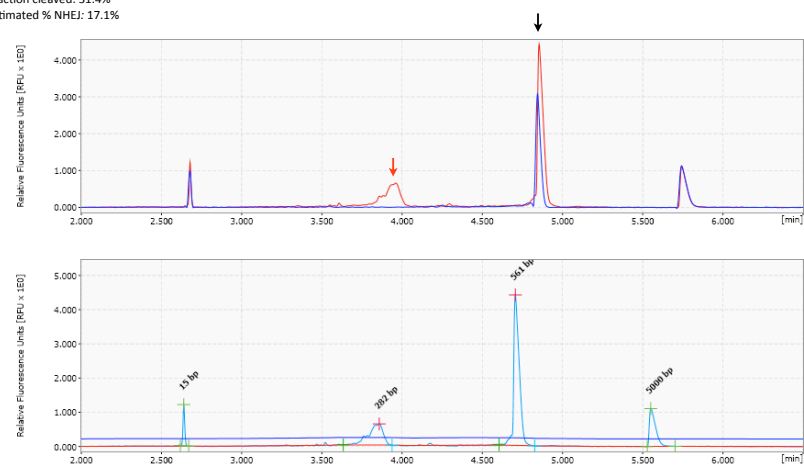
SDHB

Expected cleavage peaks: 272 bp, 412 bp
Observed cleavage peaks: 252 bp, 404 bp
Fraction cleaved: 31.4%
Estimated % NHEJ: 17.2%



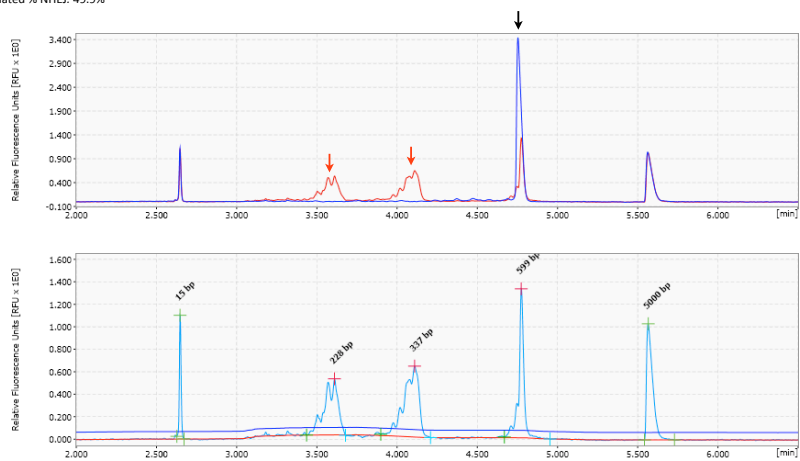
SDHC

Expected cleavage peaks: 282 bp, 284 bp
Observed cleavage peaks: 282 bp
Fraction cleaved: 31.4%
Estimated % NHEJ: 17.1%



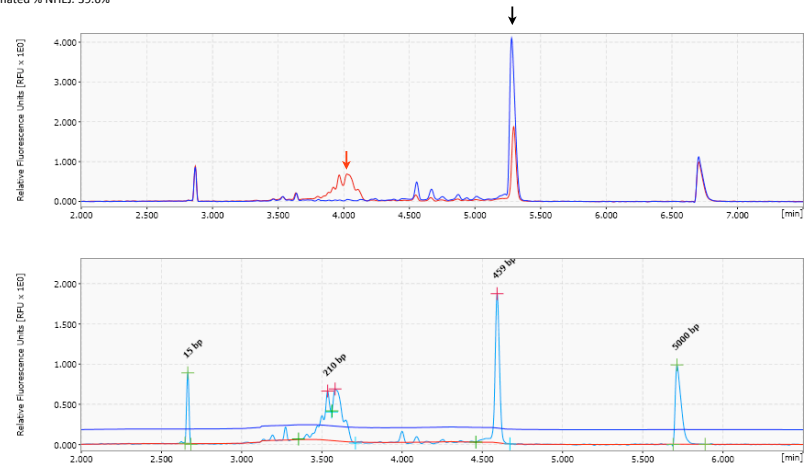
SDHD

Expected cleavage peaks: 233 bp, 340 bp
Observed cleavage peaks: 228 bp, 337 bp
Fraction cleaved: 74.9%
Estimated % NHEJ: 49.9%



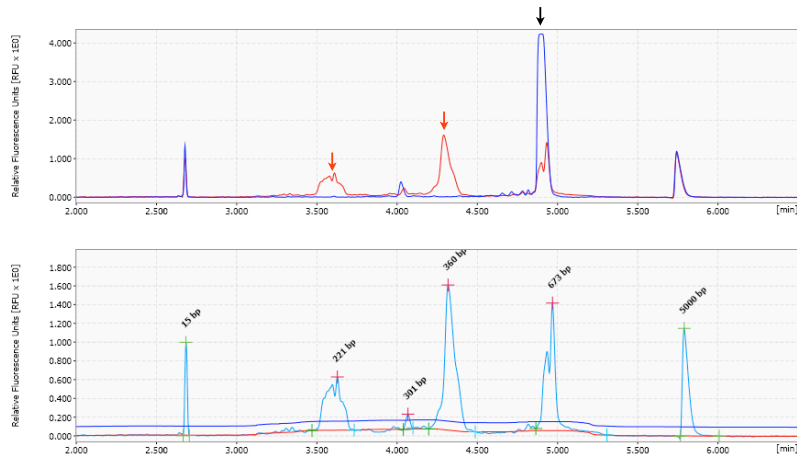
SETDB1

Expected cleavage peaks: 213 bp, 223 bp
Observed cleavage peaks: 210 bp, 219 bp
Fraction cleaved: 63.6%
Estimated % NHEJ: 39.6%



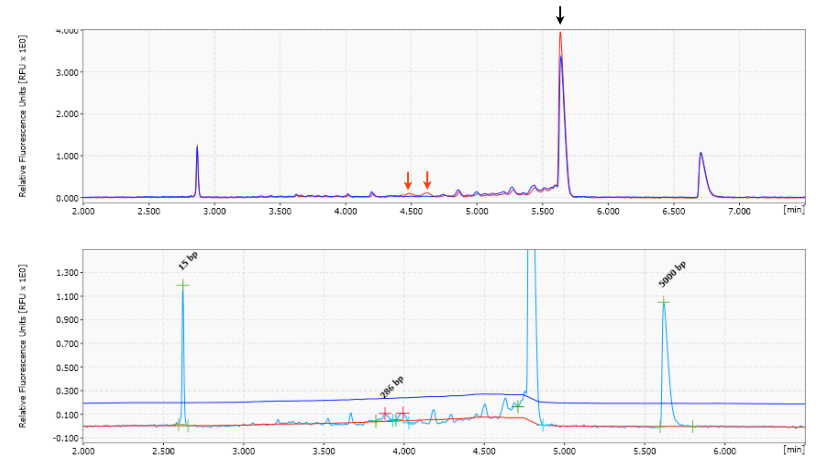
SIRT6

Expected cleavage peaks: 213 bp, 363 bp
Observed cleavage peaks: 221 bp, 360 bp
Fraction cleaved: 71.3%
Estimated % NHEJ: 46.4%



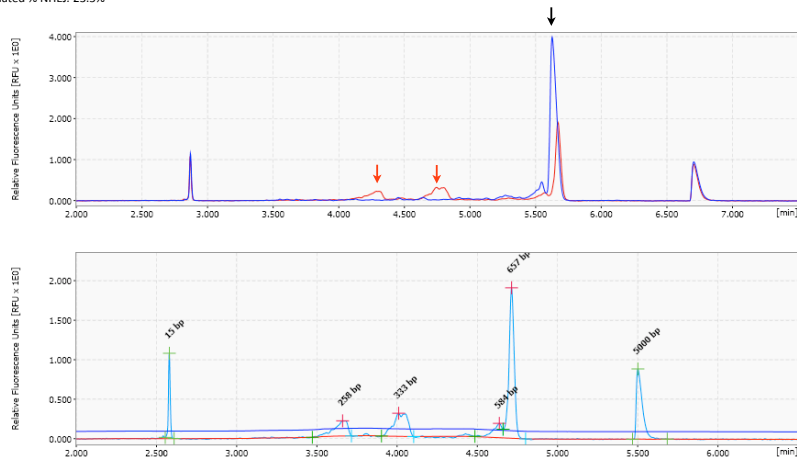
SMAD2

Expected cleavage peaks: 281 bp, 302 bp
Observed cleavage peaks: 286 bp, 310 bp
Fraction cleaved: 4.6%
Estimated % NHEJ: 2.3%



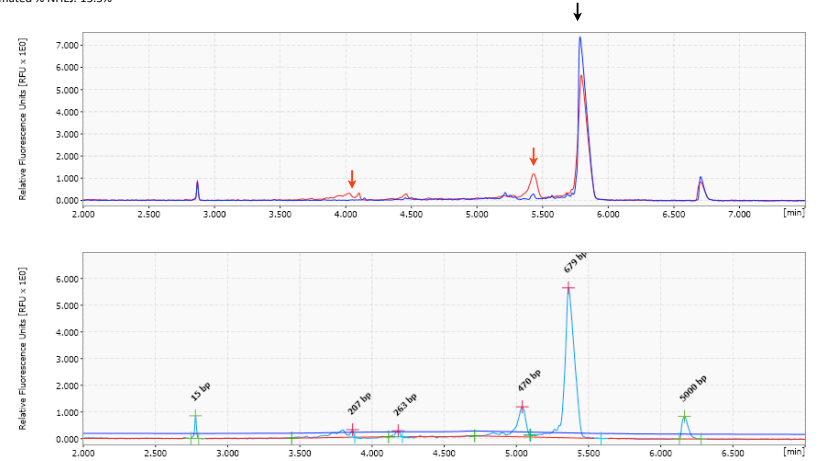
SS18

Expected cleavage peaks: 245 bp, 326 bp
Observed cleavage peaks: 258 bp, 333 bp
Fraction cleaved: 41.5%
Estimated % NHEJ: 23.5%



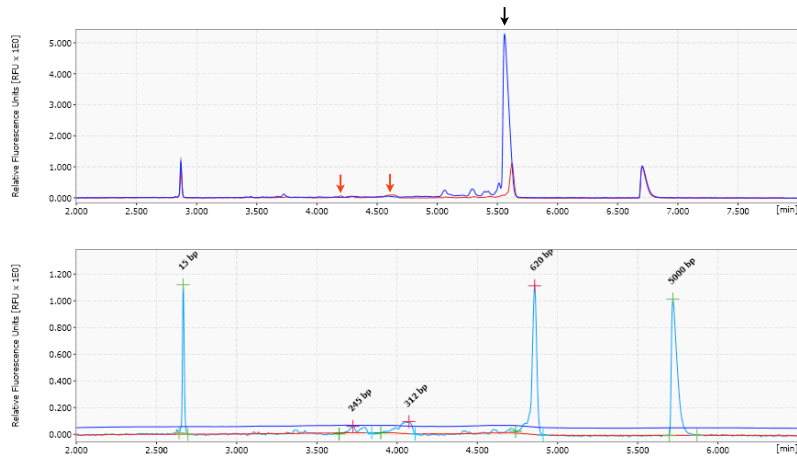
SUZ12

Expected cleavage peaks: 194 bp, 456 bp
Observed cleavage peaks: 207 bp, 470 bp
Fraction cleaved: 25.2%
Estimated % NHEJ: 13.5%



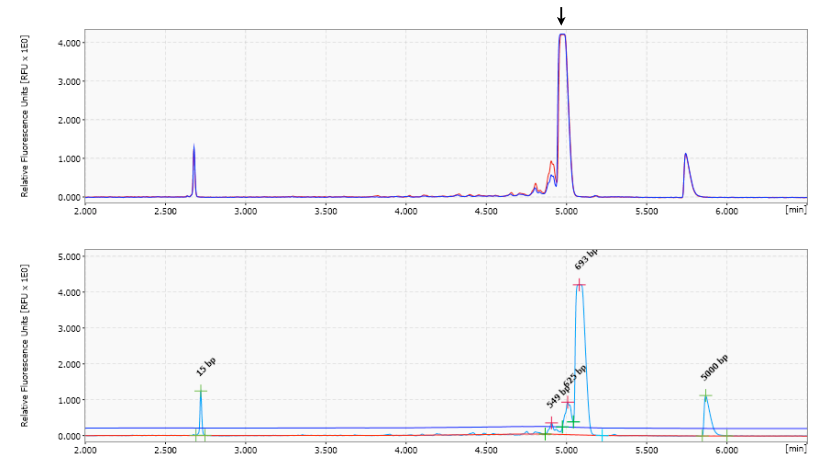
TFE3

Expected cleavage peaks: 242 bp, 302 bp
Observed cleavage peaks: 245 bp, 312 bp
Fraction cleaved: 27.5%
Estimated % NHEJ: 14.9%



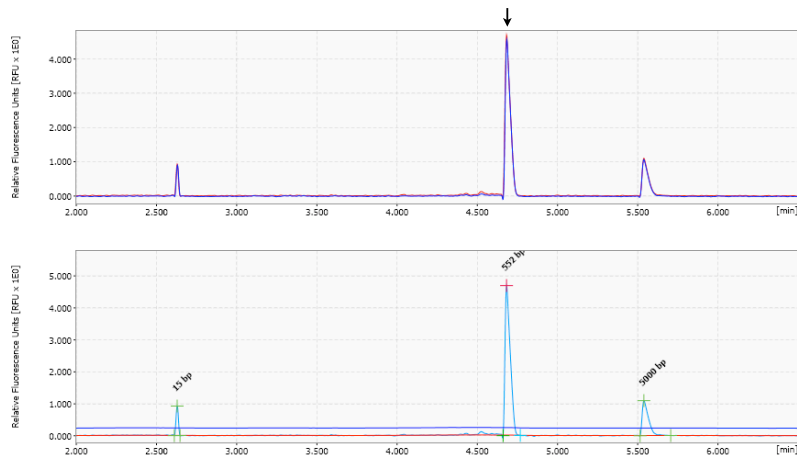
TGFBR2

Expected cleavage peaks: 317 bp, 333 bp
Observed cleavage peaks: none



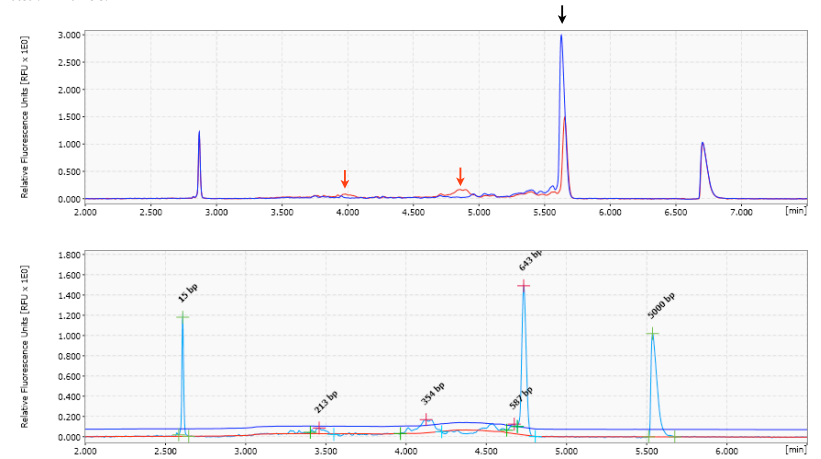
TLX3

Expected cleavage peaks: 244 bp, 306 bp
Observed cleavage peaks: none



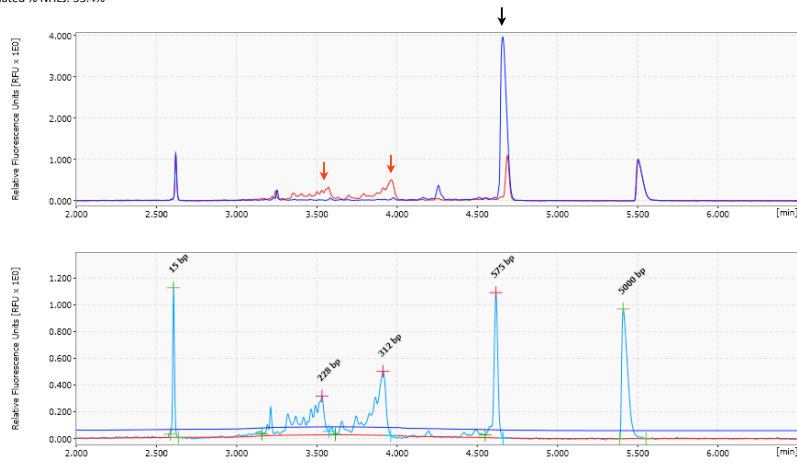
TP53

Expected cleavage peaks: 227 bp, 348 bp
Observed cleavage peaks: 213 bp, 354 bp
Fraction cleaved: 29.9%
Estimated % NHEJ: 16.3%



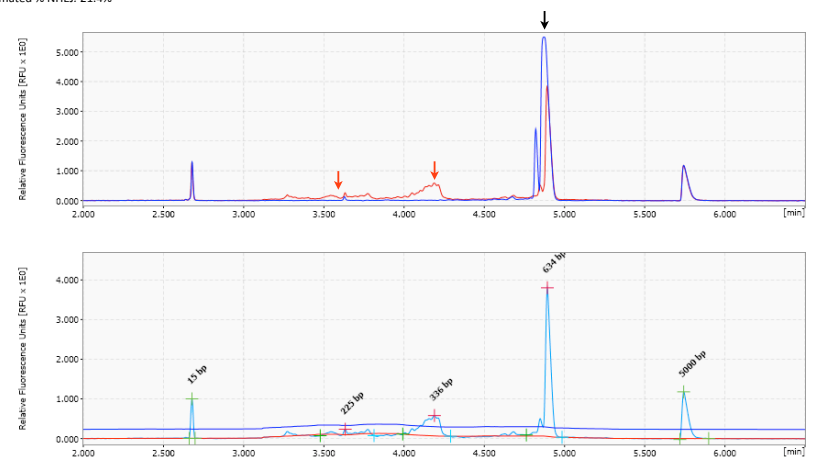
TSC2

Expected cleavage peaks: 229 bp, 314 bp
Observed cleavage peaks: 228 bp, 312 bp
Fraction cleaved: 78.3%
Estimated % NHEJ: 53.4%



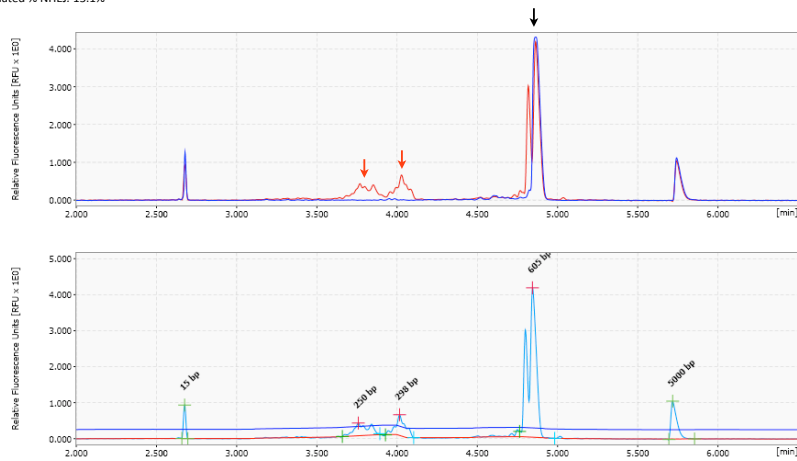
VHL

Expected cleavage peaks: 240 bp, 330 bp
Observed cleavage peaks: 225 bp, 336 bp
Fraction cleaved: 36.7%
Estimated % NHEJ: 21.4%



XPA

Expected cleavage peaks: 250 bp, 300 bp
Observed cleavage peaks: 250 bp, 298 bp
Fraction cleaved: 28.0%
Estimated % NHEJ: 15.1%



XPC

Expected cleavage peaks: 249 bp, 304 bp
Observed cleavage peaks: 248 bp, 294 bp
Fraction cleaved: 46.9%
Estimated % NHEJ: 27.1%

