Supplementary information

Chimeragenesis of distantly-related proteins by noncontiguous recombination

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Supplementary Table 1 DNA sequence of NcrBgl.

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ATGCATCACCACCACCATCACATGAACGTTAAGAAATTCCCAGAAGGCTTCCTGTGGGGCGTTGCGACC
GCGTCTTACCAGATTGAGGGTTCCCCGCTGGCAGATGGTGCGGGCATGAGCATTTGGCACACCTTTAGC
CATACCCCGGGTAATGTTAAGAATGGCGATACGGGCGATGTTGCTTGCGACCATTACAATCGTTGGAAA
GAAGATATTGAGATTATCGAAAAGCTGGGCGTCAAGGCGTACCGCTTCAGCATCTCCTGGCCGCGTATC
CTGCCGGAAGGCACGGGCCGTGTCAATCAGAAAGGTCTGGATTTCTATAACCGCATCATTGACACCCTG
CTGGAGAAAGGTATTACCCCGTTTGTCACCATCTTCCACTGGGATCTGCCGTTTGCGCTGCAACTGAAG
GGCGGTTTGCTGAATCGTGAGATTGCCGATTGGTTCGCAGAGTACAGCCGCGTGCTGTTCGAGAACTTC
GGCGACCGTGTCAAGAATTGGATTACCTTTAACGAACCGCTGTGTAGCGCGATTCCGGGTTACGGTTCT
GGCACGTTCGCTCCAGGTCGTCAAAGCACGAGCGAGCCGTGGACGGTGGGTCATAACATTCTGGTGGCC
CACGGTCGTGCGGTCAAGGTCTTTCGTGAAACGGTTAAGGACGGTAAAATCGGTATTGTTCTGAACGGC
GACTTCACGTACCCGTGGGACGCAGCGGACCCGGCAGACAAAGAGGCCGCAGAGCGCCGTCTGGAGTTC
TTCACTGCATGGTTTGCAGACCCGATCTATCTGGGCGACTATCCAGCCAGCATGCGTAAGCAGTTGGGT
GACCGTCTGCCGACCTTTACCCCGGAAGAACGTGCGCTGGTTCACGGTAGCAACGACTTTTACGGTATG
AACCATTATACCTCGAACTATATCCGCCACCGCTCCAGCCCTGCGTCTGCGGACGATACGGTTGGCAAT
GTTGATGTGCTGTTTACCAATAAACAAGGTAACTGCATTGGCCCGGAGACTGCGATGCCGTGGCTGCGT
CCGTGTGCGGCTGGTTTCCGCGACTTTCTGGTTTGGATTAGCAAACGTTATGGTTATCCTCCGATCTAT
GTGACCGAAAATGGTGCGGCCTTCGATGATGTGGTTAGCGAGGATGGTCGCGTTCACGATCAGAATCGT
ATCGACTACCTGAAAGCATATATCGGTGCAATGGTGACCGCCGTGGAATTGGACGGTGTGAATGTAAAA
GGTTACTTTGTCTGGAGCTTGCTGGATAACTTCGAGTGGGCGGAAGGTTACAGCAAGCGTTTTGGCATC
GTGTACGTGGATTACAGCACCCAAAAACGCATCGTGAAGGACAGCGGTTATTGGTACTCCAATGTCGTC
AAAAACAACGGCTTGGAGGACTGA
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Supplementary Table 2 Data collection and refinement statistics for 4GXP

Data collection	
Space group	P 31 1 2
Cell dimensions	
a, *b*, *c* (Å)	115.38, 115.38, 282.54
a, b, g (°)	90.0, 90.0, 120.0
Resolution (Å)	37.8 – 3.0 (3.00 – 3.15)
R_{merge}	5.2 (3.8)
I / sI	16.3 (3.3)
Completeness (%)	99.6 (99.6)
Redundancy	4.9 (4.8)
Refinement	
Resolution (Å)	37.4 - 3.0
No. reflections	41124
R_{work} / R_{free}	0.24/0.29
No. atoms	
Protein	9869
Ligand/ion	-
Water	2
B-factors	
Protein	13.1
Ligand/ion	-
Water	-
R.m.s. deviations	
Bond lengths (Å)	0.014
Bond angles (°)	1.73

*All data were collected from a single crystal. Values in parentheses are for highest-resolution shell.