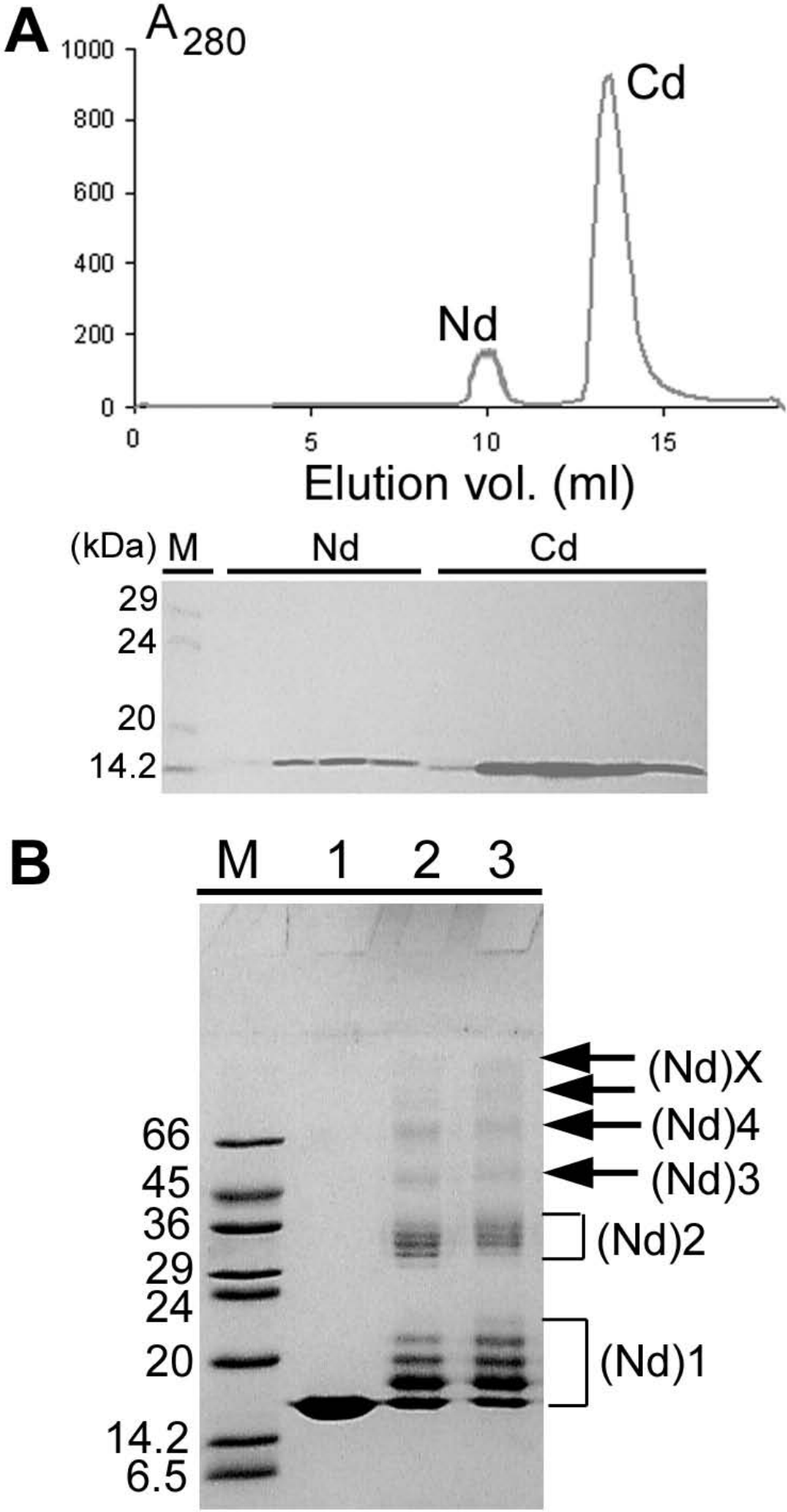
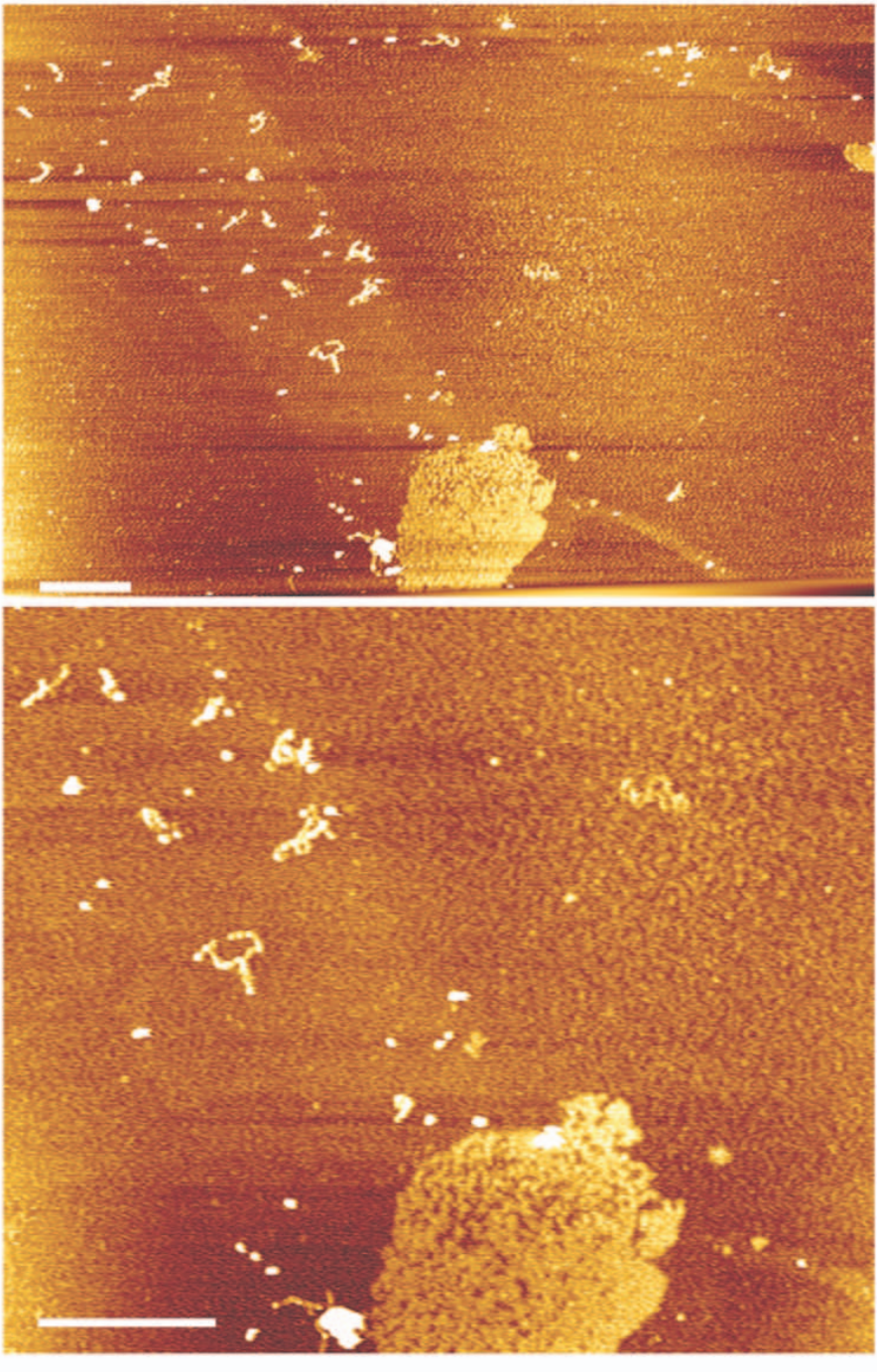

A
A280
1000
800
600
400
200
0
0
5
10
15
Cd
Nd
Elution vol. (ml)
(kDa) M
Nd
Cd
29
24
20
14.2
B
M
1
2
3
66
45
36
29
24
20
14.2
6.5
(Nd)X
(Nd)4
(Nd)3
(Nd)2
(Nd)1

A
DnaD
Cd
C
0.15μM
0.31μM
0.62μM
1.25μM
2μM
5μM
C
7μM
14μM
28μM
56μM
112μM
224μM
B
DnaD
Cd
C
0.15μM
0.31μM
0.62μM
1.25μM
2μM
5μM
C
7μM
14μM
28μM
56μM
112μM
224μM



SUPPLEMENTARY INFORMATION

Supplementary Figure 1s

A. The gel filtration profile of a mixture of Nd and Cd. The two domains elute at different positions through a superdex S200 analytical column. The individual proteins alone elute at exactly the same positions (data not shown). Nd elutes earlier indicating an oligomer. No interaction between the domains was observed. Samples from the peaks were analysed by SDS-PAGE. The presence of Nd and Cd in the early and late peaks, respectively was verified by SDS-PAGE. The MW of Nd (16,056 kDa) is slightly bigger than that of Cd (13,730 kDa) and therefore it appears at a slightly higher position in the gel.

B. Cross-linking of Nd at high concentration using SOXL. Nd (30 μM) was cross-linked with SOXL (lane 2; 840 μM, lane 3; 1680 μM). Lane M and lane 1 show molecular weight markers (kDa) and unlinked Nd, respectively. Internal cross linking is apparent in the monomeric (Nd)1 and dimeric (Nd)2 species. Higher species corresponding to trimers (Nd)3, tetramers (Nd)4 and multimers (Nd)X are also apparent.

Supplementary Figure 2s

Gel shift assays

Gel shift assays using a 19mer ss oligonucleotide (panel **A**) and a 30 mer ds oligonucleotide (panel **B**). DnaD and Cd exhibit DNA binding activity whereas Nd does not (data not shown). The shifted complexes are too big to enter into the gel and stay in the wells. Lanes C show control reactions in the absence of protein.

Supplementary Figure 3s

Typical field views (top) and zoom in (bottom) AFM images of pBR322 in the presence of both Cd and Nd. Addition of Nd did not alter the appearance of the Cd-pBR322 complexes (no OCCs observed) indicating that the presence of separate Nd does not restore the DNA remodelling activity. Several supercoiled plasmids are visible at the top left corner of these field views while a large Nd-mediated scaffold structure is shown at the bottom. Scale bars represent 1000 nm.