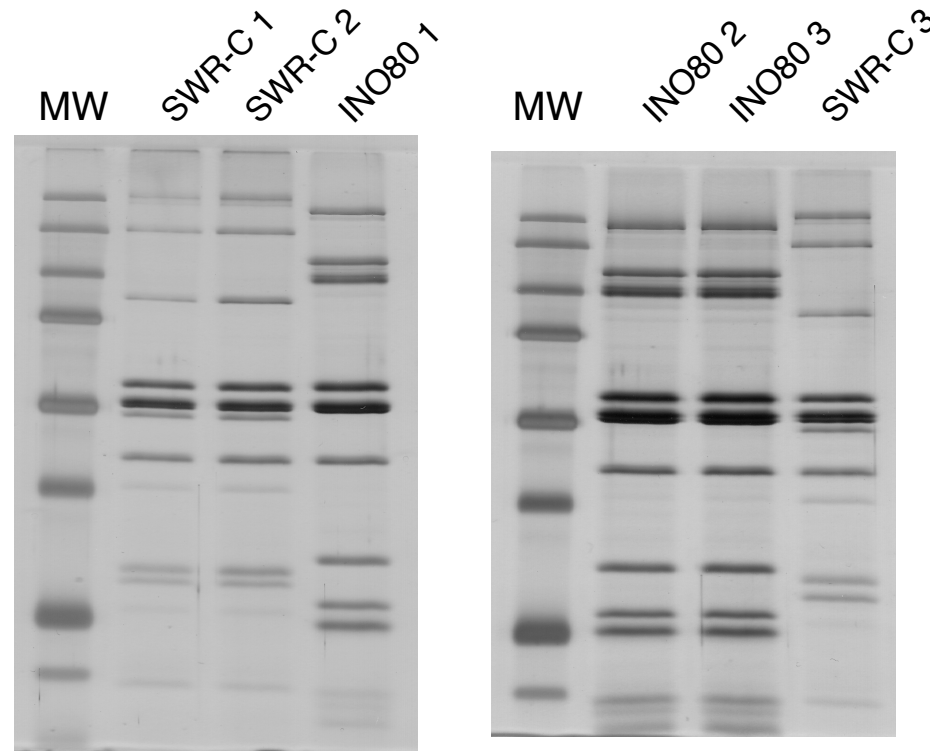


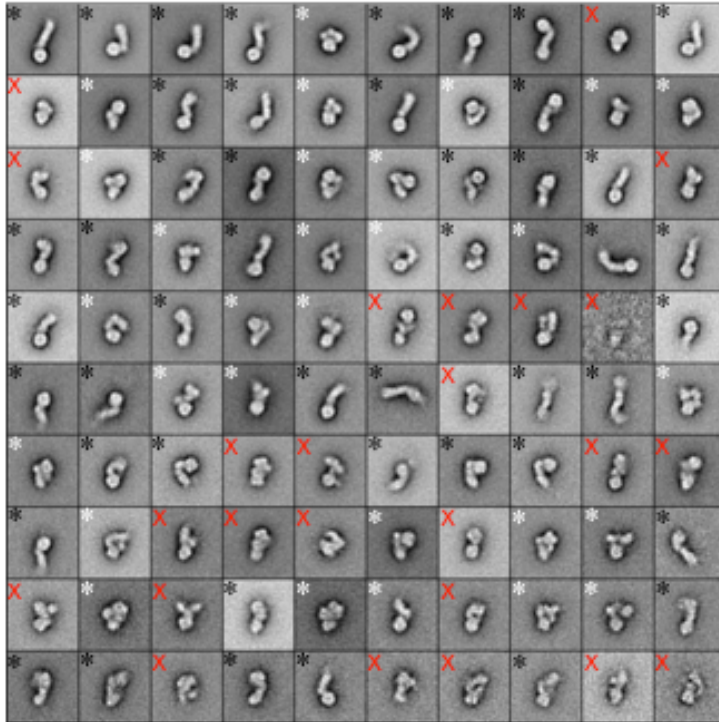
Supplementary Figure 1

**Supplementary Figure 1. SDS-PAGE image of INO80-C and SWR-C.**

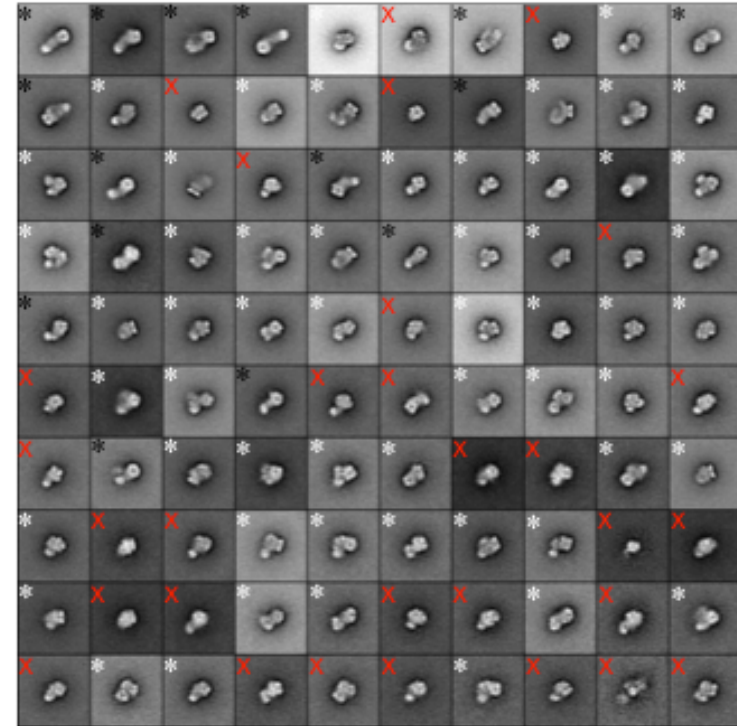
Three independent preparations of each TAP-tagged INO80-C and SWR-C were subjected to 10% SDS-PAGE and stained with silver.

Supplementary Figure 2

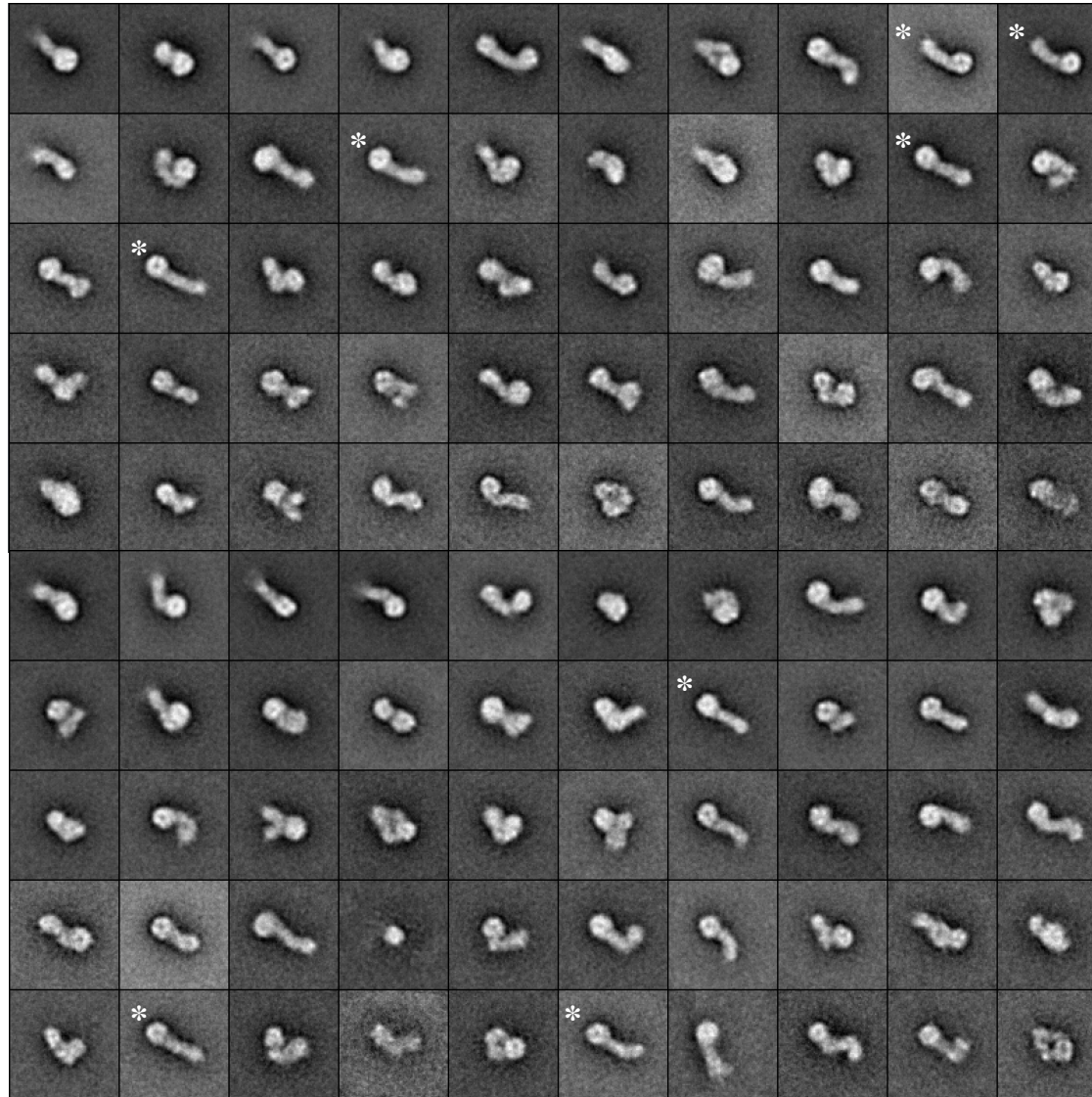
INO80-C WT



SWR-C WT

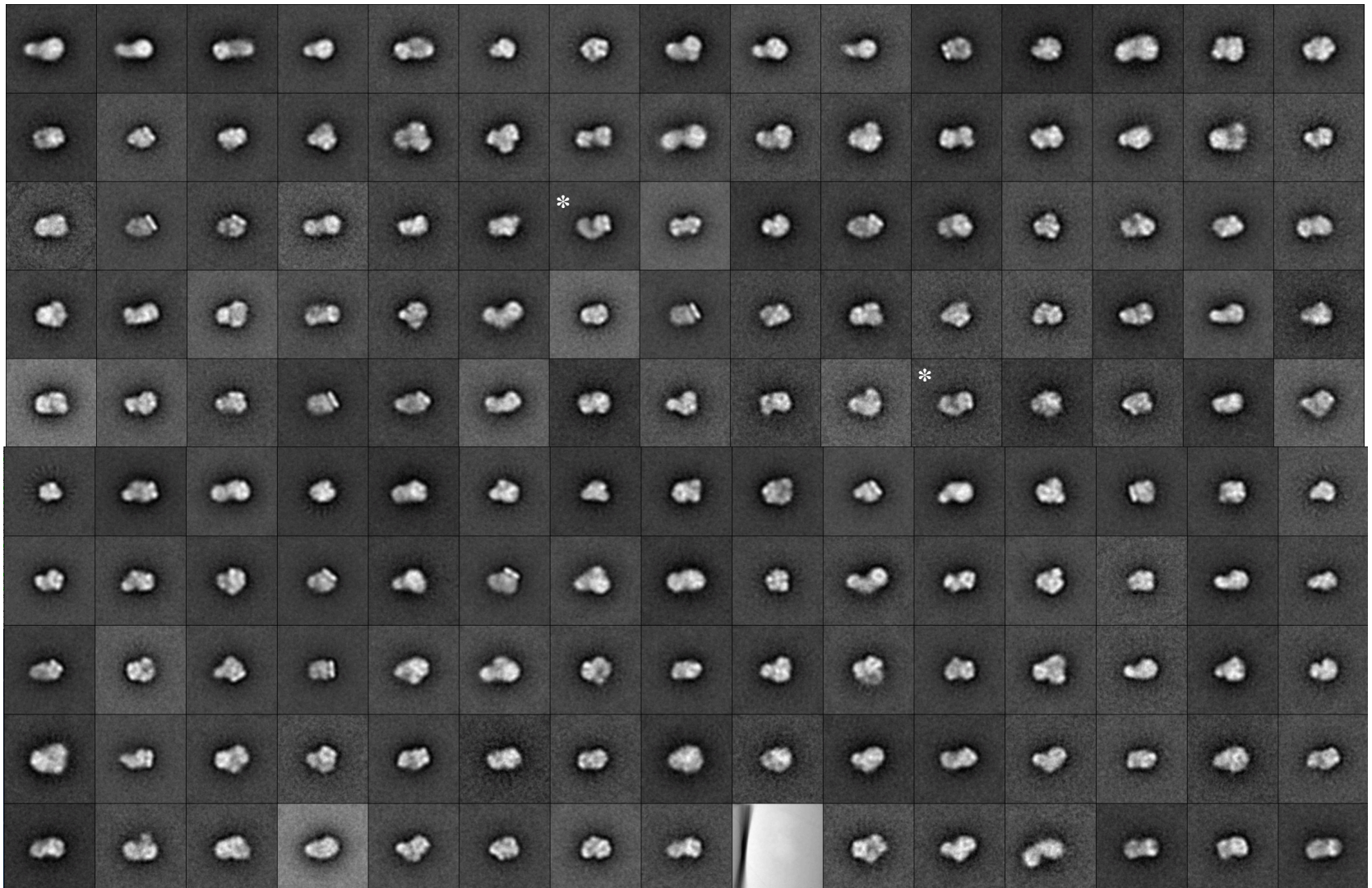
**Supplementary Figure 2. Class averages of negatively stained INO80-C and SWR-C.**

On the left are averages of INO80-C obtained by classifying 10,128 particles into 100 classes. On the right are averages of SWR-C obtained by classifying 20,412 particles into 100 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. Black asterisks at the upper left corner indicate classes assigned to be in an extended conformation. White asterisks indicate classes assigned to be in a compact conformation. Red crosses indicate averages that were not of sufficient quality to unambiguously assign the class to the extended or compact conformation. Side length of individual panels is 57.3 nm.



Supplementary Figure 3. Class averages of INO80-C selected from the images of the untilted samples (from the tilt pairs used for 3D reconstruction).

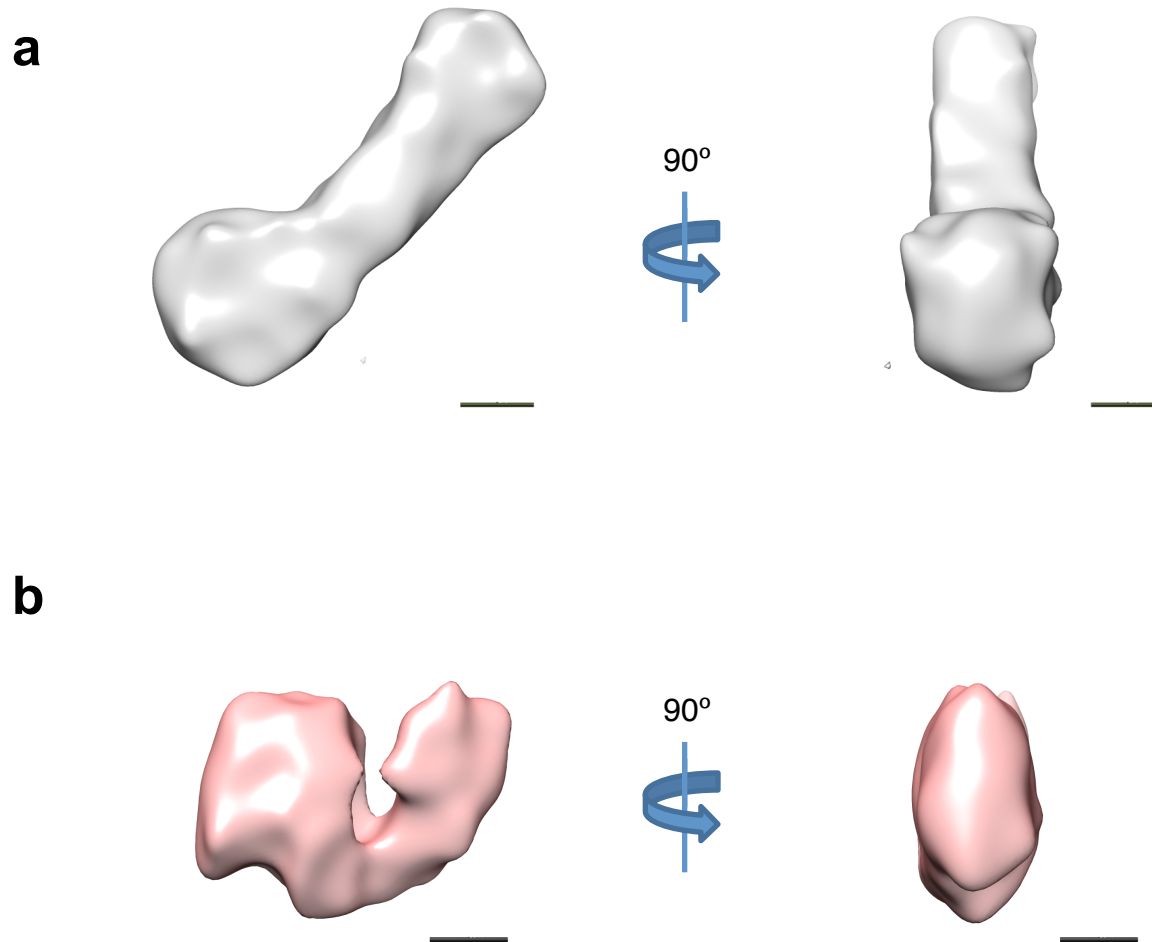
Class averages were obtained by classifying 9,384 particles into 100 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. White asterisks indicate classes that were combined for 3D reconstruction. Side length of individual panels is 59 nm.



Supplementary Figure 4. Class averages of SWR-C selected from the images of the untilted samples (from the tilt pairs used for 3D reconstruction).

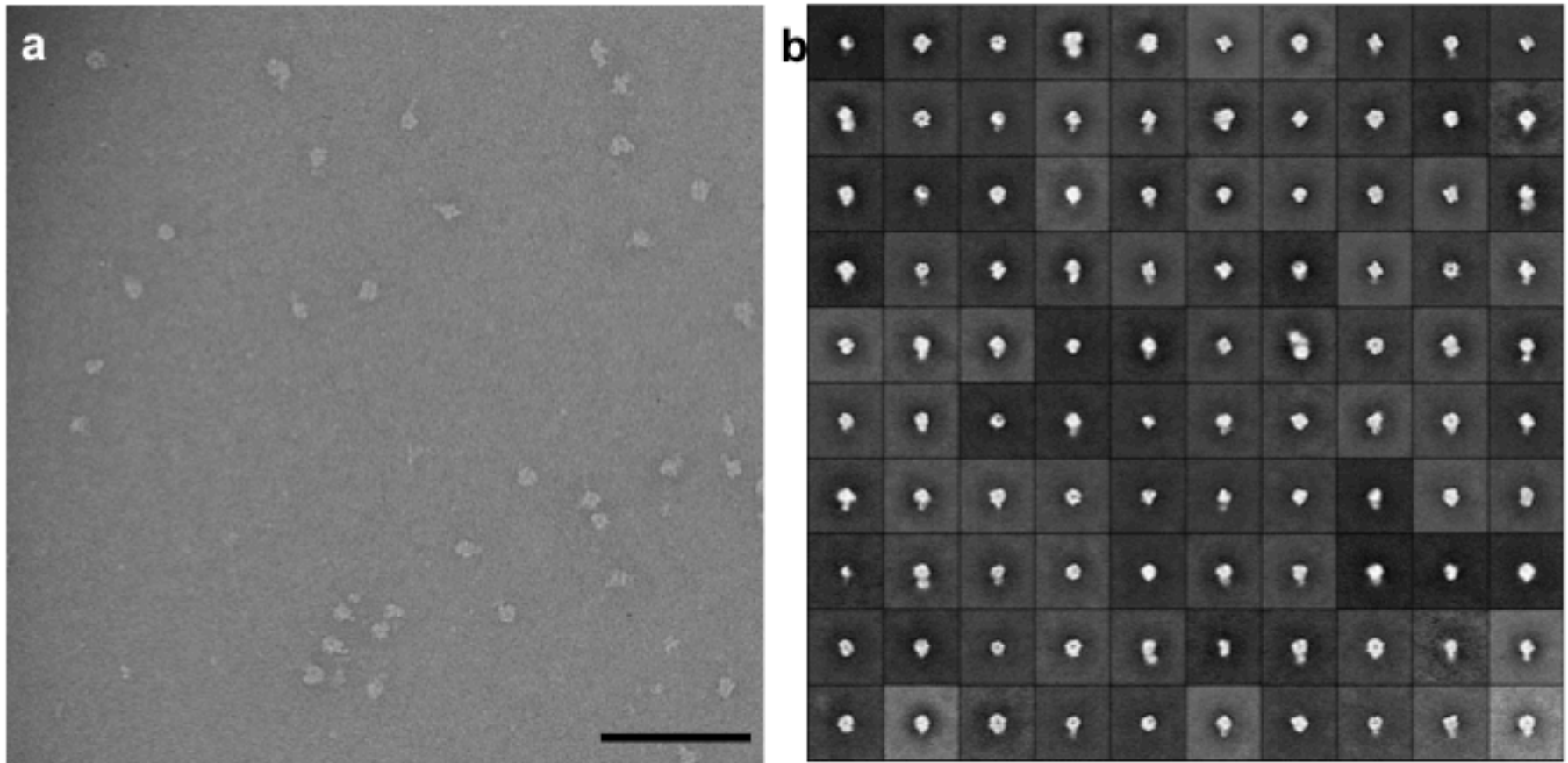
Class averages were obtained by classifying 24,052 particles into 150 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. White asterisks indicate classes that were combined for 3D reconstruction. Side length of individual panels is 59 nm.

Supplementary Figure 5



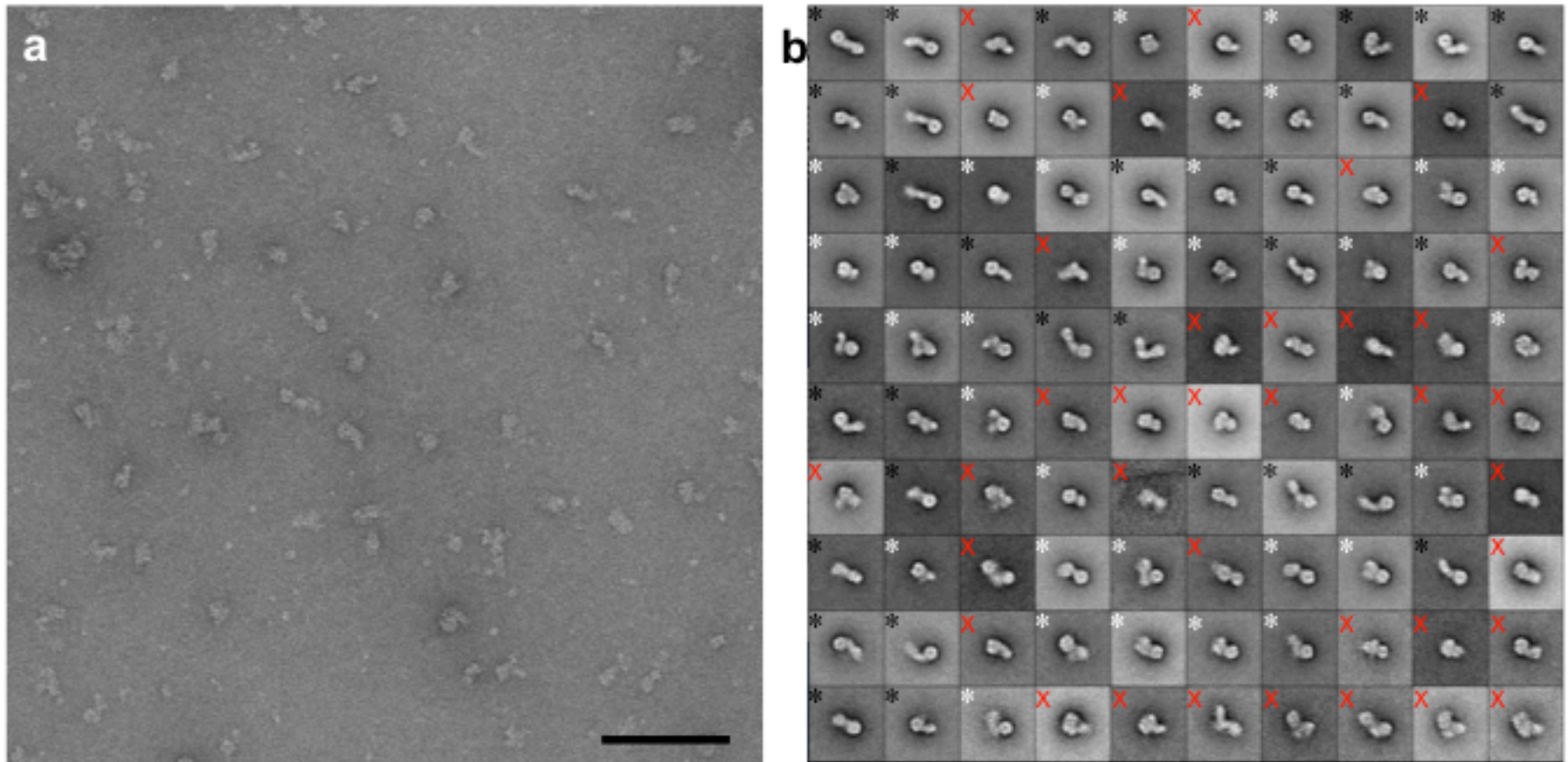
Supplementary Figure 5. 3D reconstructions of INO80-C and SWR-C.
(a) 3D map of INO80-C. Scale bar is 5 nm. (b) 3D map of SWR-C. Scale bar is 5 nm.

Supplementary Figure 6

**Supplementary Figure 6. EM analysis of INO80-C^{arp8} subcomplex.**

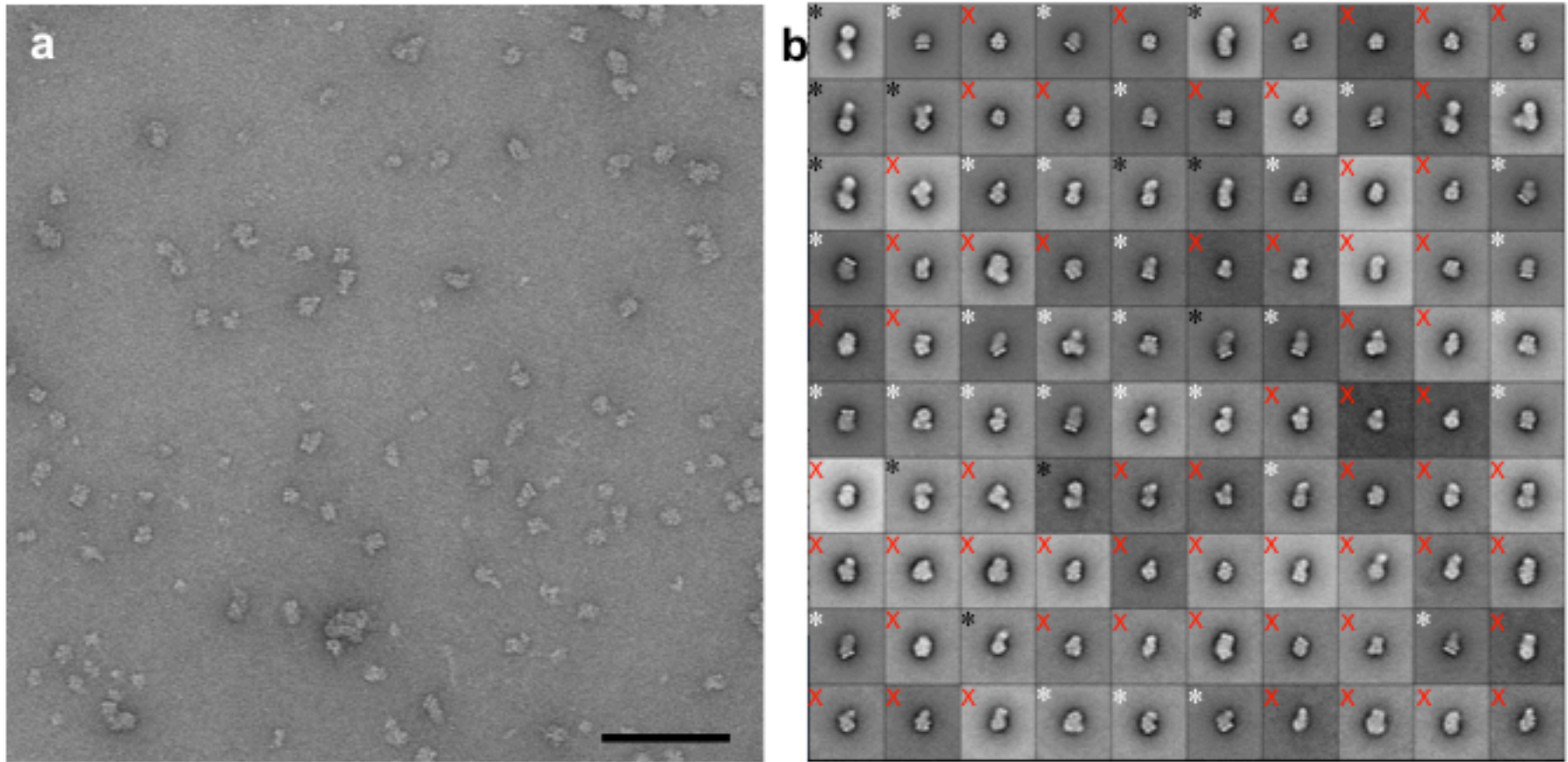
(a) Representative EM image of negatively stained INO80-C^{arp8} subcomplex. Scale bar is 100 nm. (b) Gallery of averages obtained by classification of 9,370 INO80-C^{arp8} particles into 100 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. Side length of individual panels is 57.3 nm.

Supplementary Figure 7

**Supplementary Figure 7. EM analysis of INO80-C^{ies6} subcomplex.**

(a) Representative EM image of negatively stained INO80-C^{ies6} complex. Scale bar is 100 nm. (b) Gallery of averages obtained by classification of 10,202 INO80-C^{ies6} particles into 100 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. Black asterisks indicate classes assigned to be in an extended conformation and white asterisks indicate classes assigned to be in a compact conformation. Red crosses indicate averages that were not of sufficient quality to unambiguously assign the class to the extended or compact conformation. Side length of individual panels is 62.6 nm.

Supplementary Figure 8

**Supplementary Figure 8. EM analysis of SWR1-C^{swc2} subcomplex.**

(a) Representative EM image of negatively stained SWR1-C^{swc2} subcomplex. Scale bar is 100 nm. (b) Gallery of averages obtained by classification of 10,482 SWR1-C^{swc2} particles into 100 classes. The averages are displayed in rows from the most populous class at the top left to the least populous class at the bottom right. Black asterisks indicate classes assigned to be in an extended conformation and white asterisks indicate classes assigned to be in a compact conformation. Red crosses indicate averages were not of sufficient quality to unambiguously assign the class to the extended or compact conformation. Side length of individual panels is 62.6 nm.

Subunit	Spectral count / Protein length	Sequence coverage
Swr1	7.017 ± 3.737	59.93
Rvb1	25.878 ± 10.162	82.65
Rvb2	20.043 ± 6.836	76.65
Swc7	10.409 ± 4.903	77.53
Swc4	7.738 ± 4.320	67.01
Swc6	8.205 ± 3.919	70.36
Swc2	4.061 ± 2.241	67.30
Yaf9	9.572 ± 4.955	61.80
Swc3	4.691 ± 2.402	58.67
Arp6	4.768 ± 4.192	56.62
Act1	13.771 ± 6.132	62.76
Arp4	3.710 ± 2.112	57.80
Swc5	0.679 ± 0.419	47.96
Bdf1	0.124 ± 0.146	27.11

Supplementary Table 1. SWR-C subunit stoichiometries determined by mass spectrometry.

All values of the stoichiometries represent means and standard deviations from three independent preparations.

Subunit	Spectral count / Protein length	Sequence coverage
Ino80	5.676 ± 0.949	62.93
Rvb1	37.353 ± 10.292	84.09
Rvb2	25.232 ± 5.296	81.67
les5	3.757 ± 1.548	83.20
les3	7.447 ± 1.255	82.13
Nhp10	12.305 ± 7.435	74.38
les6	2.817 ± 0.526	65.26
les1	6.023 ± 1.699	70.76
Arp8	13.111 ± 1.973	72.23
Arp4	5.718 ± 2.453	63.94
Act1	14.717 ± 3.665	70.66
Taf14	15.806 ± 2.404	67.35
les2	3.725 ± 2.389	61.67
les4	3.739 ± 2.771	57.76
Arp5	7.565 ± 2.339	59.21

Supplementary Table 2. INO80-C subunit stoichiometries determined by mass spectrometry.

All values of the stoichiometries represent means and standard deviations from three independent preparations.