Supplemental Figure legends

FIGURE S1. Multiple sequence alignment of IFT46 homologs from various species. Known secondary structure elements as observed in the crystal structure for *Tetrahymena thermophila* IFT46 (pdb 5UZZ) are shown above the corresponding regions of the alignment. Furthermore, the two fragments of the *Chlamydomonas reinhardtii* IFT46 protein used in this study (IFT46N and IFT46C) are shown

FIGURE S2. Multiple sequence alignment of ODA16 homologs from various species. Known secondary structure elements determined in the crystal structure of *Chlamydomonas reinhardtii* ODA16 described in this work (pdb 5MZH) are shown above the alignment. The individual regions (N-terminal domain, linker, β-propeller, and C-terminal tail) are labeled.

FIGURE S3. Proteomic analysis of a pulldown from a *Chlamydomonas reinhardtii* flagellar axoneme fractions using GST-IFT46/ODA16 complex as bait. The volcano plot on the left shows the position of key proteins identified by mass spectrometry, the list on the right summarizes main interactors organised by their respective multi-subunit complexes. The Coomassie stained SDS-gel inside the volcano plot (top), as well as the Western Blot for IC2 (bottom) proves that the ODA subunit IC2 is efficiently pulled down by GST-IFT46/ODA16, but not by GST alone.

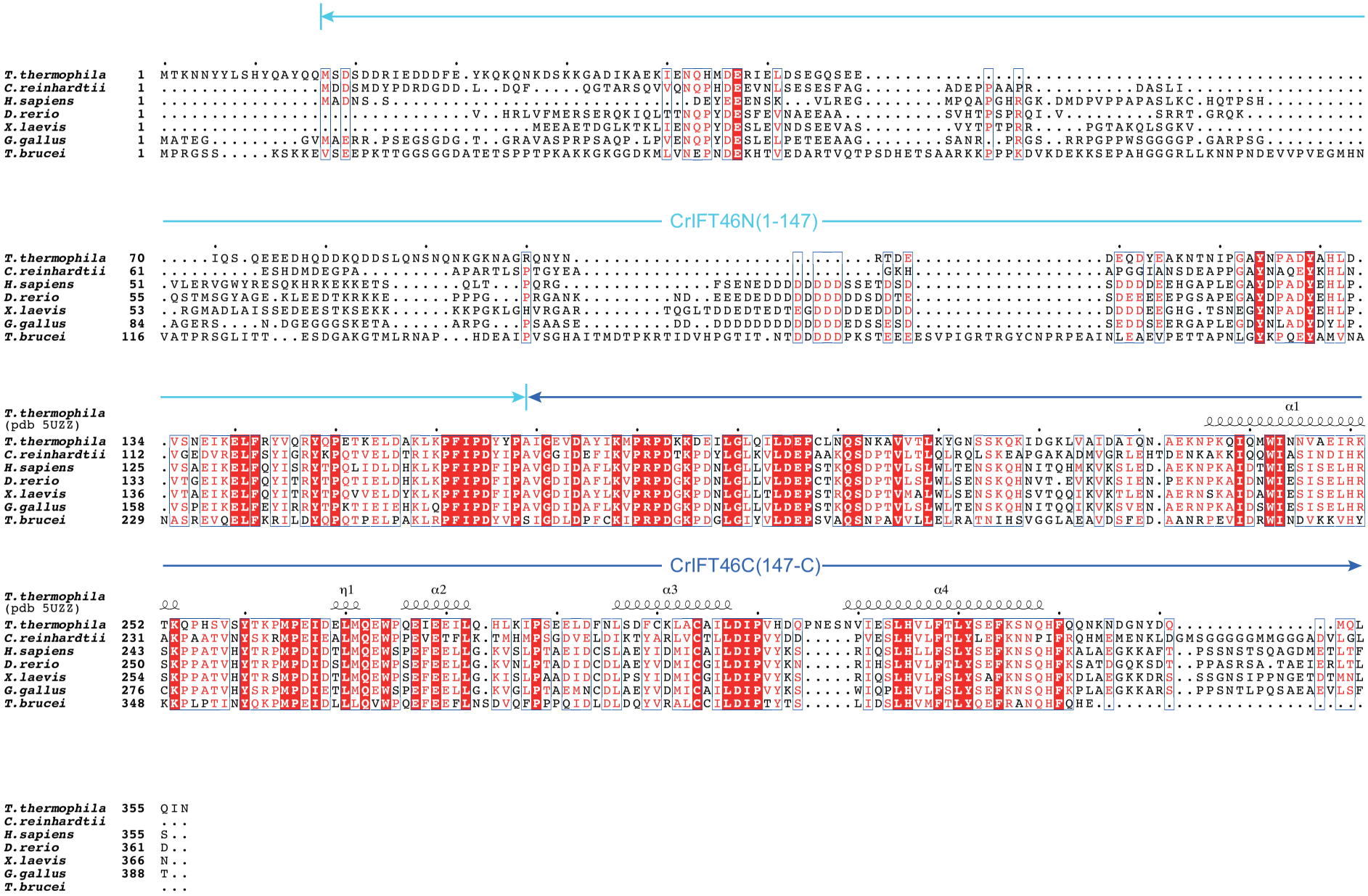

CrIFT46N(1-147)
CrIFT46C(147-C)
α1
η1
α2
α3
α4
T.thermophila
C.reinhardtii
H.sapiens
D.rerio
X.laevis
G.gallus
T.brucei
(pdb 5UZZ)

Figure S1

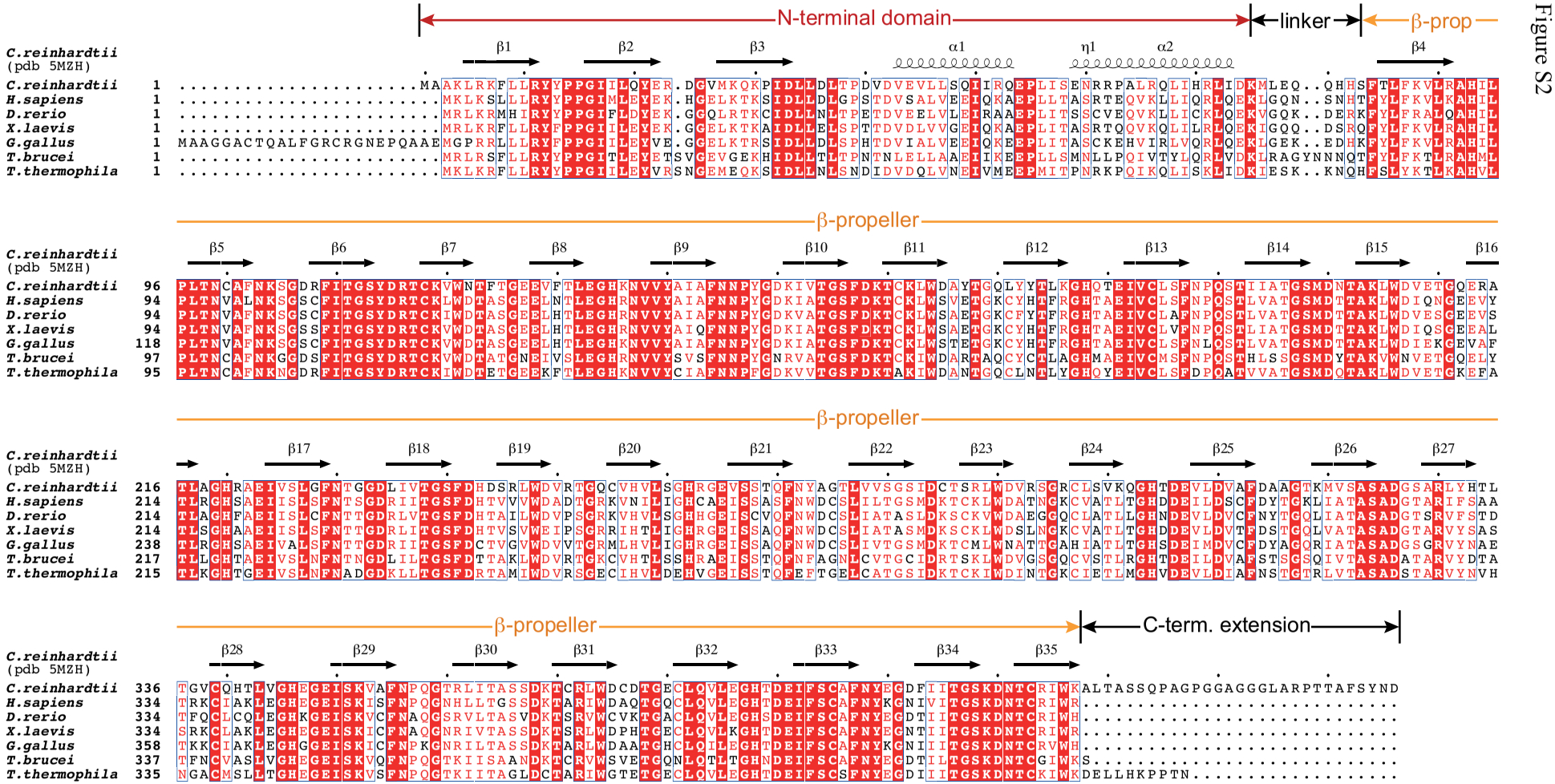
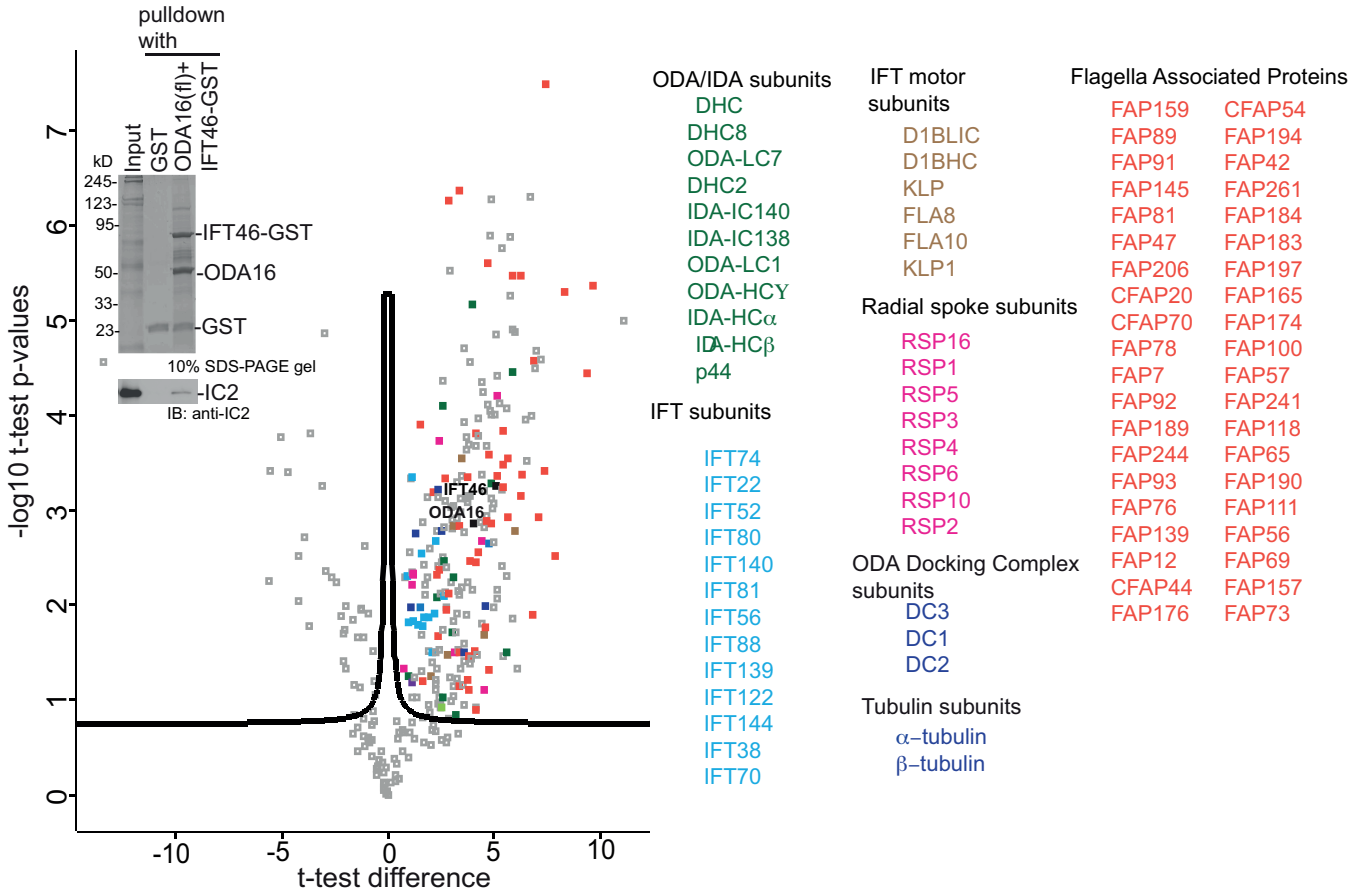

N-terminal domain
linker
β-prop
β-propeller
β-propeller
β-propeller
C-term. extension
C.reinhardtii (pdb 5MZH)
C.reinhardtii
H.sapiens
D.rerio
X.laevis
G.gallus
T.brucei
T.thermophila

Figure S2

Figure S3


pulldown with
Input
GST
ODA16(fl)+ IFT46-GST
kD
245-
123-
95-
50-
33-
23-
-IFT46-GST
-ODA16
-GST
10% SDS-PAGE gel
-IC2
IB: anti-IC2
-log10 t-test p-values
t-test difference
IFT46
ODA16
ODA/IDA subunits
DHC
DHC8
ODA-LC7
DHC2
IDA-IC140
IDA-IC138
ODA-LC1
ODA-HCY
IDA-HCα
IDA-HCβ
p44
IFT subunits
IFT74
IFT22
IFT52
IFT80
IFT140
IFT81
IFT56
IFT88
IFT139
IFT122
IFT144
IFT38
IFT70
IFT motor subunits
D1BLIC
D1BHC
KLP
FLA8
FLA10
KLP1
Radial spoke subunits
RSP16
RSP1
RSP5
RSP3
RSP4
RSP6
RSP10
RSP2
ODA Docking Complex subunits
DC3
DC1
DC2
Tubulin subunits
α–tubulin
β–tubulin
Flagella Associated Proteins
FAP159
FAP89
FAP91
FAP145
FAP81
FAP47
FAP206
CFAP20
CFAP70
FAP78
FAP7
FAP92
FAP189
FAP244
FAP93
FAP76
FAP139
FAP12
CFAP44
FAP176
CFAP54
FAP194
FAP42
FAP261
FAP184
FAP183
FAP197
FAP165
FAP174
FAP100
FAP57
FAP241
FAP118
FAP65
FAP190
FAP111
FAP56
FAP69
FAP157
FAP73