



Supplementary figure1 Gruschke *et al.* Mitochondria containing His7-tagged versions of Mrp20 (A) or Mrpl4 (B and C) were used for large-scale crosslinking, purification and MS-analyses as in Figure 3A.

<b>Bait</b>	<b>app. MW Bait</b>	<b>Sequence coverage (# of different peptides) Bait</b>	<b>app. MW Crosslinking product</b>	<b>Crosslinking partner</b>	<b>app. MW Crosslinking partner</b>	<b>Sequence coverage (# of different peptides) Crosslinking partner</b>
<b>Mrpl40His7</b>	38 kDa	41 % (11)	70 kDa	<b>Mrp20</b>	32 kDa	32 % (11)
		44 % (14)	55 kDa	<b>Mrpl27</b>	17 kDa	23 % (4)
		24 % (8)	72 kDa	<b>Mrpl13</b>	34 kDa	17 % (4)
<b>Mrpl40His7</b>	38 kDa	44 % (14)	100 kDa	<b>Mrp20 and</b>	32 kDa	15 % (5)
				<b>Mrpl13</b>	34 kDa	32 % (9)
<b>Mrp20His7</b>	33 kDa	43 % (13)	70 kDa	<b>Mrpl4</b>	36 kDa	34 % (10)
		44 % (12)	72 kDa	<b>Mrpl3</b>	40 kDa	50 % (18)
<b>Mrpl4His7</b>	37 kDa	42 % (13)	70 kDa	<b>Mrpl22</b>	32 kDa	29 % (8)
		51 % (16)	67 kDa	<b>Mrpl13</b>	34 kDa	66 % (17)
		35 % (12)	55 kDa	<b>Mrpl27</b>	17 kDa	21 % (4)
		55 % (17)	63 kDa	<b>Mba1</b>	28 kDa	31 % (6)
<b>Mba1His7</b>	30 kDa	28 % (8)	63 kDa	<b>Mrpl4</b>	36 kDa	57 % (17)
		22 % (6)	61 kDa	<b>Mrpl22</b>	32 kDa	39 % (16)

**Supplementary table 1:** Identified crosslinking partners of Mrpl4, Mrp20, Mrpl40 and Mba1. The apparent molecular weights of the proteins as well as of the crosslinking products were estimated. Sequence coverage and the number of different peptides are indicated for each protein.