

Table 3. Genes associated with DBA syndrome and genetic phenocopies

Gene symbol	Inheritance	Chromosome location	New protein symbol	Approximate frequency	References (see manuscript)
DBA SYNDROME: RIBOSOMOPATHY¹					
Small ribosomal subunit (11 genes)					
<i>RPS7</i>	AD	2p	eS7	< 1%	107
<i>RPS10</i>	AD	6p	eS10	3%	54
<i>RPS15A</i>	AD	16p	uS8	<1%	108
<i>RPS17</i>	AD	15q	eS17	1%	109
<i>RPS19</i>	AD	19q	eS19	25%	110
<i>RPS20</i>	AD	8q	uS10	< 1%	57,111
<i>RPS24</i>	AD	10q	eS24	2.4%	112
<i>RPS26</i>	AD	12q	eS26	6.6%	54
<i>RPS27</i>	AD	1q	eS27	< 1%	113
<i>RPS28</i>	AD	19p	eS28	< 1%	114
<i>RPS29</i>	AD	14q	uS14	< 1%	115
Large ribosomal subunit (13 genes)					
<i>RPL4</i>	AD	15q	uL4	< 1%	116
<i>RPL5</i>	AD	1p	uL18	7%	55
<i>RPL8</i>	AD	8q	uL2	< 1%	117
<i>RPL9</i>	AD	4p	uL6	< 1%	13,54
<i>RPL11</i>	AD	1p	uL5	5%	55
<i>RPL15</i>	AD	3p	eL15	< 1%	32,118
<i>RPL17</i>	AD	18q	uL22	< 1%	15
<i>RPL18</i>	AD	19q	eL18	< 1%	119
<i>RPL26</i>	AD	17P	uL24	< 1%	120
<i>RPL27</i>	AD	17q	eL27	< 1%	113
<i>RPL31</i>	AD	12q	eL31	< 1%	42
<i>RPL35</i>	AD	3q	uL29	< 1%	119
<i>RPL35A</i>	AD	9q	eL33	3%	121
Ribosomal protein chaperones (2 genes)					
<i>TSR2</i>	X	X		< 1%	114
<i>HEATR3</i>	AR	16q		< 1%	59
DBA SYNDROME OTHER²					
<i>GATA1</i>	X	X		< 1%	23,122-124
<i>TP53 (GOF)</i>	AD	AD		< 1%	24,25
CANDIDATE GENES³					
<i>RPS11</i>	AD	19q	uS17	< 1%	47
<i>RPL3</i>	AD	22q	uL3	< 1%	
<i>RPL10</i>	AD	X	uL16	< 1%	
<i>RPL10A</i>	AD	6p	uL11	< 1%	
<i>RPL19</i>	AD	17q	eL19	< 1%	
<i>RPL34</i>	AD	4q	eL34	< 1%	
<i>RPL0</i>	AD	12q	uL10	< 1%	
GENETIC PHENOCOPIES⁴					
<i>ADA2</i>	AR	22q11.1			27,29,43
<i>EPO</i>	AR	7q22.1			26

¹ Bona fide ribosomopathy genes validated functionally (ribosomal biogenesis defect or presence of somatic genetic rescue).

² Genes affecting pathways implicated in DBA syndrome and associated with hyporegenerative anemia.

³ Considered putative due to lack of studies demonstrating impaired ribosomal biogenesis.

⁴ Diseases with different pathomechanisms that can manifest with pure red cell aplasia.

Abbreviations: AD, autosomal dominant; X, X-linked recessive; AR, autosomal recessive; GOF, gain-of-function