

Table S3: Allele frequencies of 44 variants typed in the discovery data set comprising Danish, Swedish, and Italian individuals (DK/SWE/ITA) and 13 variants typed in the model data set comprising Norwegian individuals (NO).

Gene	Variant <sup>1</sup>	Reference allele	Variant allele	Variant allele frequency				
				DK (n=357)	SWE (n=182)	ITA (n=218)	DK-SWE- ITA (n=757)	NO (n=523)
<b>HERC2</b>	<b>rs12913832*</b>	<b>A</b>	<b>G</b>	<b>0.85</b>	<b>0.84</b>	<b>0.48</b>	<b>0.74</b>	<b>0.83</b>
<i>IRF4</i>	rs1050976	C	T	0.42	0.45	0.46	0.44	
<i>IRF4</i>	rs10530949	TCT	-	0.45	0.41	0.42	0.43	
<i>IRF4</i>	rs12211228	G	C	0.15	0.13	0.14	0.14	
<i>IRF4</i>	rs9378807	C	T	0.47	0.48	0.51	0.49	
<i>TYR</i>	rs11018509	T	A	0.27	0.34	0.28	0.29	
<b>TYR</b>	<b>rs1126809</b>	<b>G</b>	<b>A</b>	<b>0.23</b>	<b>0.26</b>	<b>0.25</b>	<b>0.24</b>	<b>0.24</b>
<i>TYR</i>	rs1393350*	G	A	0.22	0.25	0.23	0.23	0.23
<i>TYR</i>	rs2047512	T	C	0.38	0.37	0.30	0.35	
<i>TYR</i>	rs34749698	T	C	0.22	0.25	0.23	0.23	
<b>TYR</b>	<b>rs7120151</b>	<b>A</b>	<b>G</b>	<b>0.75</b>	<b>0.70</b>	<b>0.76</b>	<b>0.74</b>	<b>NA</b>
<i>TYR</i>	rs9919559	T	C	0.31	0.38	0.33	0.33	
<b>SLC24A4</b>	<b>rs10131374</b>	<b>G</b>	<b>A</b>	<b>0.15</b>	<b>0.10</b>	<b>0.16</b>	<b>0.14</b>	<b>0.15</b>
<i>TYRP1</i>	rs10491745	T	C	0.81	0.83	0.82	0.82	
<i>SLC24A4</i>	rs12590749	C	A	0.33	0.34	0.46	0.37	
<i>SLC24A4</i>	rs12880508	C	T	0.76	0.75	0.70	0.74	
<i>SLC24A4</i>	rs12894551	T	C	0.64	0.63	0.69	0.65	

<b>TYRP1</b>	<b>rs1408799</b>	<b>T</b>	<b>C</b>	<b>0.70</b>	<b>0.68</b>	<b>0.64</b>	<b>0.68</b>	<b>0.69</b>
SLC24A4	rs17128288	A	G	0.32	0.29	0.27	0.30	
SLC24A4	rs17128324	C	T	0.15	0.15	0.22	0.17	
TYRP1	rs201447946	T	TA	0.06	0.06	0.06	0.06	
SLC24A4	rs34755843	CGACTCT	-	0.17	0.16	0.15	0.16	
SLC24A4	rs35617057	G	T	0.41	0.44	0.40	0.41	
SLC24A4	rs4904887	C	G	0.33	0.33	0.42	0.36	
SLC24A4	rs4904891	G	C	0.37	0.36	0.30	0.35	
SLC24A4	rs4904897	C	T	0.24	0.22	0.20	0.22	
<b>SLC24A4</b>	<b>rs4904927</b>	<b>A</b>	<b>G</b>	<b>0.90</b>	<b>0.89</b>	<b>0.81</b>	<b>0.87</b>	<b>0.89</b>
SLC24A4	rs59977926	T	C	0.17	0.18	0.20	0.18	
TYRP1	rs62538950	A	T	0.10	0.09	0.12	0.10	
TYRP1	rs62538956	T	C	0.12	0.11	0.10	0.11	
SLC24A4	rs7144273	C	T	0.50	0.50	0.46	0.49	
SLC24A4	rs7152962	G	A	0.23	0.20	0.28	0.23	
SLC24A4	rs7401792	G	A	0.64	0.66	0.56	0.62	
TYRP1	rs74606098	C	T	0.06	0.07	0.06	0.06	
TYRP1	rs79586719	G	A	0.07	0.07	0.06	0.06	
<b>OCA2</b>	<b>rs1800407*</b>	<b>C</b>	<b>T</b>	<b>0.04</b>	<b>0.05</b>	<b>0.11</b>	<b>0.07</b>	<b>0.03</b>
IRF4	rs12203592*	C	T	0.07	0.06	0.13	0.08	0.09
<b>SLC24A4</b>	<b>rs12896399*</b>	<b>G</b>	<b>T</b>	<b>0.56</b>	<b>0.51</b>	<b>0.36</b>	<b>0.49</b>	<b>0.52</b>
<b>SLC45A2</b>	<b>rs16891982*</b>	<b>C</b>	<b>G</b>	<b>0.96</b>	<b>0.95</b>	<b>0.87</b>	<b>0.93</b>	<b>0.95</b>
<b>OCA2</b>	<b>rs1800401</b>	<b>G</b>	<b>A</b>	<b>0.04</b>	<b>0.01</b>	<b>0.07</b>	<b>0.04</b>	<b>0.05</b>
OCA2	rs1800414	T	C	0.00	0.01	0.00	<0.01	
OCA2	rs62008729	C	T	0.11	0.10	0.04	0.09	

<b>OCA2</b>	<b>rs121918166<sup>2</sup></b>	<b>C</b>	<b>T</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>&lt;0.01</b>	<b>0.01</b>
<b>OCA2</b>	<b>rs74653330<sup>2</sup></b>	<b>C</b>	<b>T</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>&lt;0.01</b>	<b>0.02</b>

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<sup>1</sup>Variants in bold were part of the EC11 SNPs and typed in the model data set. rs7120151 was not included in the final prediction modelling

<sup>2</sup>The combined frequency of rs121918166 and rs74653330 was 0.01 in the discovery data set

\*Part of IrisPlex prediction model [3]

NA: Not analysed