

Frq.	Allel / Allele	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	A*02:78(A2)																									
	A*02:829(A2)																									
x	A*03:01:01:01/02:01/05:01(A3)																									
	A*03:01:01:02N(NuII) 01:01:03/01:01:04/01:01:05/01:01:06/01:01:07/01:01:08/01:01:09/01:01:10/01:01:11/01:01:12/01:01:13/01:01:14/01:01:15/01:01:16/01:01:17/01:01:18/01:01:19/01:01:20/01:01:22/01:01:23/01:01:24/01:01:25/01:01:26/01:01:27/01:01:29/01:01:30/01:31/01:32/01:33/01:34/01:35/01:36/01:37/01:38/01:40/01:41/01:42/01:43/01:44/01:45/01:46/01:47/01:48/01:49/01:50/01:51/01:52/01:53/01:54/01:55/01:56/01:57/01:58/01:59/01:60/01:61/01:62/01:63/01:64/01:65/01:66/01:67/01:68/01:69/01:70/01:71/01:72/01:73/01:74/01:75/01:76/01:77/01:78/01:79/01:81/01:82/01:83/01:84/01:85/01:86/01:87/01:88/01:89/01:90/01:91/01:92/01:93/01:94/02:02/02:03/02:04/02:05(A3) 03N(NuII) 04:01/04:02/04:03/05:02/06/07:01:01/07:01:02/07:02/08:01:01/08:01:02/09/10/100/101/102/103:01/104/105/106/108/110/111/112/113/114/115/116/117/118/119(A3) 11N(NuII) 120/121/122/123:01/123:02/124/125/126/127/128(A3) 129N(NuII) 13/130/131/132/133/134/135/136/137/138/139/14/140/141/142/143/144/145:01/145:02/146/147/148/149/151/150/151/153/154:01/154:02/155/156/157:01/157:02/158/159/16/160(A3) 161N/162N(NuII) 163/164/165/166/167(A3) 168N(NuII) 169/17:01/17:02/170/172/174/175/176/177(A3) 178N(NuII) 179/180/181/182/183/184/185/188/189/19/190/191(A3) 192N(NuII) 193/195/196(A3) 197:01N/197:02N(NuII) 198/199/20/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218(A3) 21N(NuII) 22:01/22:02/22/221/222/223/224/225/226/227/228/229/23:01/23:02/230/231:01/231:02/232/233(A3) 234Q(NuII) A3) 235/236/237/238/239/24/240/241/242/243/244/245/246/247/248/249/25/250/251/252/253/254/255/256/257/258/259/26/261(A3) 262N(NuII) 263/264/265(A3) 266N(NuII) 268(A3) 269N(NuII) 27/270/272/274(A3) 275N(NuII) 276/277/278(A3) 279N(NuII) 28/280:01/280:02/281/282(A3) 283N/284N(NuII) 285(A3) 286N(NuII) 287/288/289:01/289:02/29/290/291/292/293/294/295/296(A3) 297N(NuII) 298/299/30/300/301/302/303/304/305/306/307/308/309/31/310/311/312/313/314/315/316/317/318/319/32/320/321/322(A3) 323N(NuII) 324/325/326/327/328(A3) 329N(NuII) 330N(NuII) 331/332/333(A3) 334N/335N/336N/337N(NuII) 338/339/34/340/341(A3) 342N(NuII) 343/344/345:01/345:02/346/347/348/349/351/350/351/352/353/354/355/356(A3) 357N(NuII) 358/359/360/361/362/363(A3) 364N(NuII) 365/366/367/368/369(A3) 36N(NuII) 37/370/371/372(A3) 373N(NuII) 375/376/377/378/379/38/380(A3) 381N(NuII) 383/384/385/386/387(A3) 388Q(NuII) A3) 389/39/390/391/392/393/394/395/396/397/40/42/44:01/44:02/45/46/47/48/49/50/51:01/51:02/52/53/54/55/56/58/59/60/61/62:01:01/62:01:02/63/64/65/66/67(A3) 68N/69N(NuII) 70/71/72/73/74/75/76/77/78/79/80/81/83/84/85/86/87/89:02/90(A3) 91N(NuII) 92/93/94/95/96/97/98/99(A3)																									
	A*03:01:01:21/01:01:28/01:08/107/109/152/173/219/267/273/382/398/41/57(A3)																									
	A*03:01:19/103:02(A3)																									
	A*03:01:39(A3)																									
	A*03:12(A3)																									
	A*03:17/271/373(A3)																									
	A*03:18(A3)																									
	A*03:186/43/82(A3)																									
	A*03:187(A3)																									
	A*03:208(A3)																									
	A*03:24(A3)																									
	A*03:88(A3)																									
	A*03:89:01(A3)																									
x	A*11:01:01:01/02:01:01/03/04(A11)																									
	A*11:01:01:02/01:01:03/01:01:04/01:01:05/01:01:06/01:01:07/01:01:08/01:01:09/01:01:10/01:01:11/01:01:12/01:01:13/01:01:14/01:01:15/01:01:16/01:01:17/01:01:18/01:01:19/01:01:20/01:01:21/01:01:22/01:01:23/01:01:24/01:01:25/01:01:26/01:01:27/01:01:28/01:01:29/01:30/01:31/01:32/01:33/01:34/01:35/01:36/01:37/01:38/01:40/01:41/01:42/01:43/01:44/01:45/01:46/01:47/01:48/01:49/01:50/01:51/01:52/01:53/01:54/01:55/01:56/01:57/01:58/01:59/01:60/01:61/01:62/01:63/01:64/01:65/01:66/01:67/01:68/01:69/01:70/01:71/01:72/01:73/01:74/01:75/01:76/01:77/01:78/01:79/01:80/01:81/01:82/01:83/01:84/01:85/01:86/01:87/01:88/01:89/01:90/01:91/01:92/01:93/01:94/01:95/01:96/01:97/01:98/01:99/02:01:02/02:02/02:03/02:04/02:05/02:06/05/06/07/08/09/100/101/102/103/104/105/107/108(A11) 109N(NuII) 110/111/112/114(A11) 115N(NuII) 116/117/118/119:01/119:02/12:01/12:02/120/122/123/124/125/126:01:01/126:01:02(A11) 127N(NuII) 128/129/13/130/131/132/133/134/135/136(A11) 137:01N/137:02N(NuII) 138/139/14/140/141/142/143/144/145/146/147/148/149/15:01/15:02/150/151/152/153:01/153:02/154/156/157/159/16/160/161/163/164/165/166/167/168/169(A11) 170Q(NuII) A11) 171/172/173/174/175/176/177/179(A11) 180N(NuII) 181(A11) 182Q(NuII) A11) 183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/20/200/201/202/203/204/205/206/207(A11) 208N(NuII) 209(A11) 210N(NuII) 211/212/213/214(A11) 215N(NuII) 216/217/218/219(A11) 21N(NuII) 22/220/221/223/224/225/227/228/229/23/230/231/232/233/234(A11) 235Q(NuII) A11) 236/237(A11) 238N(NuII) 239/24:01/24:02/240/241/242/243/244/245/246/247/248/249/25:01/25:02(A11) 251N(NuII) 252/253/254/255(A11) 256Q(NuII) A11) 257/258/259/26/260/261/262/263/264/265/266/267/268/269/27/270(A11) 272Q(NuII) A11) 273/274/275/276/277/278/279/280/281/282/283/284/285/286(A11) 287N(NuII) 288/289/29/290/291/292/293/294/295/296/297/298/299/30/300/301/302:01/302:02/303/304/305/306/307/309/31(A11) 310N(NuII) 311(A11) 313Q(NuII) A11) 314/315/316/317/318/319/32:01/32:02/320/321/322/323/324/325/327/328/329/33:01/33:02/330/331/332/333/334/335/336/337/338/339/34(A11) 340N(NuII) 341/342/343/344/345/346(A11) 347N(NuII) 348/349/35/350(A11) 351Q(NuII) A11) 352/353/354/355:01/355:02/356/357/358/36/360/361/362/363/364(A11) 365N(NuII) 366/367/368/369/37/370/371/373/374(A11) 375Q(NuII) A11) 376/377/378/379/38/380/381(A11) 382N(NuII) 39/41/42/44/45/46/47/48/49(A11) 50Q(NuII) A11) 51(A11) 52Q(NuII) A11) 54:01/54:02/55/56/58/59/60/61/62/63/64/65/66/67/68(A11) 69N(NuII) 70:01/70:02/71/72/73/75/76/77/79/80/81/82/83/84/85/86/87/89/90/91:01/91:02/92/93/94/95/96/97(A11) 99N(NuII)																									
	A*11:01:01:03/01:01:08(A11)																									
	A*11:01:105/199:01/199:02/199:03/222/43/74/88(A11)																									
	A*11:10(A11)																									
	A*11:106/121/17/178/18/19/190/223/250/308/312/40(A11) 78N(NuII) 98(A11)																									
	A*11:11(A11)																									
	A*11:113/182(A11)																									
	A*11:155/226(A11)																									
	A*11:158/359/57(A11)																									
	A*11:271(A11)																									
	A*11:326(A11)																									
	A*11:372(A11)																									
	A*11:90(A11)																									
x	A*23:01:01:01(A23)																									
	A*23:01:01:02/01:01:03/01:01:04/01:01:05/01:01:06/01:01:07/01:01:08/01:01:09/01:01:10/01:01:11/01:01:12/01:01:13/01:01:14/01:01:15/01:01:16/01:01:17/01:01:18/01:01:19/01:02/01:03/01:04/01:05/01:06/01:07/01:08/01:09/01:10/01:11/01:12/01:13/01:14/01:15/01:16/01:17/01:18/01:19/01:20/01:21/01:22/01:23/01:24/01:25/01:26/01:27/01:28/01:29/01:30/01:31/01:32/02/03:02:01/03:02:02/04/05/06(A23) 07N/08N(NuII) 09/10/100/101/102(A23) 103N(NuII) 105(A23) 106N(NuII) 107Q(NuII) A23) 108N(NuII) 109(A23) 11N(NuII) 12/13/14:01/14:02/15/16/17:01:01/17:01:02/17:01:03/17:02/18(A23) 19N(NuII) 20/21/22/23/24/25/26/27/28/29/30/31/32/33/35/37:01/37:02(A23) 38N(NuII) 39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/58/59/60/61/62/63/64/65/67/68/70/71/72/73/74/75/76/77/78/79/80/81/82(A23) 84N(NuII) 85/86/87/88/89/90(A23) 91N(NuII) 92/93/94/95/96/97/98/99(A23)																									
	A*23:01:01:09/104/105/34(A23)																									
	A*23:03:01/83(A23)																									
	A*23:36(A23)																									
	A*23:57/66(A23)																									

ABDR SSPtray

Reaktionsschema/Reaction Pattern

Allel Datenbank/Allele database:

2020-10-15 HLADB_3.42.0

REF
LOT

826230

B928301-db2020-10V1

187856/03-08/2012

Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
x	DRB1*01:01:01:01:01:02:01:01[DR1]																							
	DRB1*01:01:01:02:01:01:03:01:01:04:01:02:01:03:01:04:01:05:01:06:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:01:18:01:19:01:20:01:21:01:22:01:23:01:24:01:25:01:26:01:27:01:28:01:29:01:30:01:31:01:32:01:33:01:34:01:35:02:01:02:02:01:03:02:02:02:03:02:04:02:05:02:06:02:07:02:08:02:09:02:10:02:11:02:12:02:13:04:05:06:07:08:09:10:100:101:103:104:105:106:107:108:109:11:01:11:02:110:113:114:115:116:117:118:12:13:14:16:17:18:01:18:02:19:20:01:20:02:21:22:25:26:27:28:29:01:29:02:30:31:32:34:35:36:37/38[DR1]/40N[Null]/41/43:44:01:44:02:45:46/47:48/49/50[DR1]/52N[Null]/53/55/56/57/58/59/60[DR1]/62:01N/62:02N[Null]/63/64/65:01/65:02/66/67[DR1]/68N[Null]/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/90[DR1]/91Q[Null/DR1]/92/93/94/95/96/97/98[DR1]																							
	DRB1*01:01:03:07/111/112/15/23/24:01/24:02/29:02[DR1]/33N[Null]/51/54/99[DR1]																							
x	DRB1*01:03:01[DR103]																							
	DRB1*01:03:02/03:03/03:04/03:05[DR103]/102[DR1]/39N[Null]/42/61/89[DR1]																							
x	DRB1*03:01:01:01:04:01[DR17]																							
	DRB1*03:01:01:02:01:01:03:01:02:01:03:01:04:01:05:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:01:18:01:19:01:20:01:21:01:22:01:23:01:24:01:25:01:26:01:27:01:28:01:29:01:30:01:31[DR17]/02:03/02:04:02:05[DR18]/04:02[DR17]/05:01/05:02/05:03/06/07:01/07:02/09/100:01/100:02/104/105/106/107/108/109[DR3]/11:01/11:03[DR17]/110/112/113/114/116/117/118/119/12/120/121/122/123/124/127/128/129/13:01/13:02/131/132/133/134/135/136/137/138/139/14/141/142/143/144/145/146/147/148/149/15:01/15:02/150/151/152/153/154/155/158/159/16/160/161/163/164/165/166/167/168/169/17/170/171/172/175/176/178/179/18/19/20/21/22/23/24/25:01/25:02/26/28/30/31/32/33/34/35/36/37/39/40/41:01/41:02/44/45/47/48/50/51/52:01/52:02/54/55/56/57/58/59/60/61/62/63/66[DR3]/67N/68N[Null]/69/70/71:01/71:02/72/73/75/77/78/79/80/81/82/83/84/85/86/89/93/94/95/96/97/98/99[DR3]																							
	DRB1*03:01:06:01:07:01:09:01:15[DR17]/08/13:01/13:02/130/140[DR3]/156N[Null]/167/46/59/64/65[DR3]/67N[Null]/79[DR3]																							
	DRB1*03:01:14[DR17]/127/135/173[DR3]/174N[Null]/69/70/86/91[DR3]																							
x	DRB1*03:02:01/03[DR18]																							
	DRB1*03:02:02[DR18]/101/102/103/115/27/29/38/53/74/88/90[DR3]																							
	DRB1*03:10[DR17]																							
	DRB1*03:110[DR3]																							
	DRB1*03:111/162/92[DR3]																							
	DRB1*03:125[DR3]																							
	DRB1*03:126/177/76[DR3]																							
	DRB1*03:157[DR3]																							
	DRB1*03:157/171/19[DR3]																							
	DRB1*03:38/88[DR3]																							
	DRB1*03:42/87[DR3]																							
	DRB1*03:43[DR17]																							
	DRB1*03:49[DR3]																							



Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
x	DRB1*04:01:01:01:01:02:01/03:01:01:04:01:01:05:01:01:06:01/07:01:01/08:01/09:10:01/11:01/15[DR4]																							
	DRB1*04:01:01:02:01:01:03:01:01:04:01:01:05:01:01:06:01:02:01:03:01:04:01:05:01:06:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:01:18:01:19:01:20:01:21:01:22:02:02/02:03/02:04/02:05/02:06/02:07/03:01:02/03:01:03/03:02/03:03/03:04/03:05/03:06/03:07/03:08/03:09/03:10/03:11/03:12/03:13/03:14/03:15/03:16/03:17/04:01:02/04:01:03/04:01:04/04:01:05/04:01:06/04:02/04:03/04:04/04:05/04:06/04:07/04:08/04:09/04:10/04:11/04:12/04:13/04:14/04:15/04:16/04:17/04:18/05:01:02/05:01:03/05:01:04/05:01:05/05:02/05:03/05:04/05:05/05:06/05:07/05:08/05:09/05:10/05:11/05:13/05:14/05:15/05:16/05:17/05:18/05:19/05:20/05:21/05:22/06:02/06:03/06:04/06:05/06:06/06:07/07:01:02/07:02/07:03/07:04/07:05/07:06/08:02/08:03/08:04/08:05/10:02/10:03/100/101/102/103/104/105:01/105:02/106/107/108/109/11:02/11:03/11:04/11:05/11:06/111/112/113/114/115/116/117/118[DR4]/119N[Null]/12[DR4]/120N[Null]/121/122/123/124/125/126/127/128/129/13/130:01/130:02/131:01/131:02/132/133/134/135/136/137/138/139/14/140/141[DR4]/142N[Null]/143/144/145/147/148/149/150/151/152/153/154/155/156[DR4]/157N/158N[Null]/159/16/160/162/163/164/165/166/167/168/169/17:01/17:02/170/171/173/174/175/176/177[DR4]/178N[Null]/179/18/180/181/182/183/184/185[DR4]/186N[Null]/187/188/189/19/190/191/192/193/194/195/196/197/198/199/20/200/201/202/203/204/205/206/207/208/209/21/210[DR4]/212N[Null]/213[DR4]/214N[Null]/215/216/217/218/219/22/220/221/222/223/224/225/226:01/226:02/227/228/229/23/230/231/232/233/234/236/237/238/239/24/240/241/242/243/244/245/246[DR4]/247N[Null]/248/249/25/250/252/254/255/256/257/258/259/26/260/261/262/263/265[DR4]/266N/267N[Null]/268/269/27/270/271/272/273/274/275/276/277/278/279/28/281/282/283/284/285[DR4]/286N[Null]/287/288/289/29/290/291/292/293/294/296/297/298[DR4]/299N[Null]/30[DR4]/300N[Null]/301/302/303/304/305/306/307/308/309/31/310/311[DR4]/312N[Null]/32/33/34/35/36/37/38/39/40/41/42/43/44:01/44:02/45/46/47/48/49/50/51/52/53:01/53:02/54/55/56:01/56:02/57/58/59/60/61/64/65/66/67/68/70/71/72:01/72:02/73:01/73:02/74:01/74:02/75/76/77/78/79/80[DR4]/81N[Null]/82/83/84/85/86/87/88/89/90/91/92/93[DR4]/94:01N[Null]/95:01/95:02/96/97/98:01/98:02/99[DR4]																							
	DRB1*04:01:03/03:14/230[DR4]																							
	DRB1*04:110/161/172/195/253[DR4]/264N/280N[Null]/295/63[DR4]																							
	DRB1*04:146/169/235/251/62/69[DR4]																							
	DRB1*04:211[DR4]																							
x	DRB1*07:01:01:01[DR7]																							
	DRB1*07:01:01:01:01:02:01:01:03:01:04:01:01:05:01:02:01:03:01:04:01:05:01:06:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:01:18:01:19:01:20:01:21:01:22:01:23:01:24:01:25:03/04/05/06/07/08/09/100[DR7]/101N[Null]/102/103/104/105/106/107/108/109[DR7]/10N[Null]/11/110/111/112/113/114/115/116/117[DR7]/118N[Null]/12/13/14/15/16/17/18/19/21/22/23/25[DR7]/26N[Null]/27/28/29/30/31/32/33/34:01/34:02/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57[DR7]/58N[Null]/59/60/61/62/63/65/66/67[DR7]/68N[Null]/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86[DR7]/87N[Null]/88/89/90/91/92/93/94/95/96/97/98/99[DR7]																							
	DRB1*07:20/23/24/64/80[DR7]																							
x	DRB1*08:01:01:02:01:01:04:01:05:06/07/11[DR8]																							
	DRB1*08:01:02:01:04:01:05:01:07:02:01:02:02:02:03/02:04/04:02/04:03/04:04/04:05/04:06/04:07/08/100/101/103/16/17/22/24:01/24:02/26/28/39/42/43/44/50/52/54/55/59/64/67/70/72/73/75/77[DR8]/78N[Null]/79/81/82/83/84/85/86/87/88[DR8]/89N[Null]/90/92/93/94/96/98/99[DR8]																							
	DRB1*08:01:06/57/80[DR8]																							
x	DRB1*08:03:02:01/10[DR8]																							
	DRB1*08:03:02:02/03:02:03/03:03/03:04/03:05/03:06/03:07/03:08/03:09/03:10/03:11/03:12/102/104/12/13/14/15/18/19/23/25/27/29/30:01/30:02/30:03/32/33/34/36:01/36:02/37/40/45:01/45:02/46/47/48/49/51/53/56/58[DR8]/60N[Null]/61/62/63/65/66/68:01/68:02/69/71/74/76/91/95/97[DR8]																							
	DRB1*08:09:01/09:02/21[DR8]																							
	DRB1*08:20[DR8]																							
	DRB1*08:31[DR11]/41[DR8]																							
	DRB1*08:35[DR8]																							

Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
	DRB1*08:38(DR8)																							
	DRB1*08:67/98(DR8)																							
x	DRB1*09:01:02:01(DR9)																							
	DRB1*09:01:02:02/01:02:03/01:02:04/01:02:05/01:03/01:04/01:05/01:06/ 01:07/01:08/01:09/01:10/01:11/02:01/02:02/03/04/05/08/09/10/11/12/ 13/14/15/16/17/18/19/20/21/22/24/25/26/27/28/29/30/31/32/33/ 34/35/36(DR9)/37N(Null)/38/39/40/41/42/43/44/45(DR9)																							
	DRB1*09:01:03/06/09/19/23(DR9)																							
	DRB1*09:07(DR9)																							
x	DRB1*10:01:01:01(DR10)																							
	DRB1*10:01:01:02/01:01:03/01:02/01:03/01:04/01:05/01:06/01:07/01:08/ 01:09/01:10/01:11/01:12/01:13/01:14/01:15/03/04/05/06/07/08/09/10/ 11/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/ 32/33/34/35/36/37(DR10)/38Q(Null/DR10)/39/40(DR10)																							
	DRB1*10:02/12/35(DR10)																							
x	DRB1*11:01:01:01/03:01/06:01/09:11:01(DR11)																							
	DRB1*11:01:01:02/01:01:03/01:01:04/01:02/01:03/01:04/01:05/01:06/ 01:07/01:08/01:09/01:10/01:11/01:12/01:13/01:14/01:15/01:16/01:17/ 01:18/01:20/01:21/01:22/01:23/01:24/03:02/03:03/03:04/04:02/04:03/ 04:04/04:05/04:06/04:07/04:08/04:09/04:10/04:11/06:02/06:03/10:01/ 10:02/100/101:01/101:02/104/106/108/109/11:03/110/111/112/113/ 114/115/116/12:01/12:02/120/121/122/123/126/128/129/133/134/ 135/137/138/139/140/141/142/143/144/145/146/147:01/147:02/148/ 149/150/151/152/154/155/156/157/158/160/161/162/163/164/166/ 167/168(DR11)/169N(Null)/170/27:01/27:02/27:03/28:01/28:02/29:01/ 29:02/32/33/35/36/37:01/37:02/38/39/40/41/43/44/46:01/46:02/47/ 49:01/49:02/50/51/54:01/54:02/56/58:01/58:02/59/60/61/62:01/62:02/ 63:01/63:02/68/72/74:01/74:02/75/76/77/78/80/81/83/84:01/84:02/ 84:03/85/87/88/90/91/92/93/94/95/96/97/99(DR11)																							
	DRB1*11:01:19/04:11/08:01/08:02/08:03/104/130/131/144/153/19:02/ 22/26/30/34/57/69/79/95(DR11)																							
	DRB1*11:01:25/01:26/01:27/01:29/01:31/01:32/01:33/01:34/ 01:35/01:36/01:37/01:38/01:39/01:40/01:41/01:42/04:01:02/04:12/ 04:13/04:14/04:15/04:16/04:17/04:18/04:19/04:20/04:21/04:22/117:01/ 117:02/12:03/15:01/15:02/165:01/165:02/172/174/176/177/178/179/ 180/181/182/183/185/186/187/188/189/190/192/194:01/194:02/195/ 196/197/198/199/200/201/203/204/205/206/207/208/210/211/212/ 213/214/215/216(DR11)/217N(Null)/218/219/220/221/222/223/224/ 225/226/227/228/230/231/232/233/234/235/236/237/238/239/24:01/ 24:02/240/241/243/244/245(DR11)/246N(Null)/247/249(DR11)/ 250N(Null)/252/253/254/255/257/258/259/260/262/263/265/268/269/ 271(DR11)/272Q(Null/DR11)/273/274/277/28:03/66:01/66:02(DR11)																							
	DRB1*11:01:28/117:01/117:02/201/220/247(DR11)/248Q(Null/DR11)/ 261/267/42:01/42:02(DR11)																							
x	DRB1*11:02:01:01(DR11)																							
	DRB1*11:02:01:02/02:03/02:04/02:05/02:06/02:07/124:01/124:02/242/ 251/256/276(DR11)																							
	DRB1*11:02:02/118/127/14:01/14:02/171/20/21/48/65:01/65:02/70/ 86(DR11)/16																							
x	DRB1*11:04:01:01(DR11)																							
x	DRB1*11:05(DR11)																							
	DRB1*11:07:01/07:02/103:01/103:02/105/107/125/136/53(DR11)																							
	DRB1*11:102:01/102:02(DR11)																							
	DRB1*11:119/45(DR11)																							
x	DRB1*11:13:01(DR11)																							
	DRB1*11:13:02/202/266(DR11)																							
	DRB1*11:132/18/19:02/19:03/31/70/73/98(DR11)																							
	DRB1*11:134/67(DR11)																							
	DRB1*11:153/55/64/82(DR11)																							
	DRB1*11:159/17/52/89(DR11)																							
	DRB1*11:173(DR11)																							
	DRB1*11:175/275/278(DR11)																							
	DRB1*11:184/191(DR11)																							
x	DRB1*11:19:01(DR11)																							
	DRB1*11:193:01/193:02/209/229/270(DR11)																							
	DRB1*11:196(DR11)																							

Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
	DRB1*11:23:01/23:02/25/55(DR11)																							
	DRB1*11:264(DR11)																							
	DRB1*11:55(DR11)																							
x	DRB1*12:01:01:01(DR12)																							
	DRB1*12:01:01:02/01:01:03/01:01:04/01:01:05/01:01:06/01:02/01:03/01:04/01:05/01:06/01:07/01:08/01:09/03:02/03:03/05/06/07/08/09/10/11/12/17(DR12)/24N(Null)/25/28/29/30/34/35/36/40/41/42/46/47/48/53/54/59/62/63/66/68/70(DR12)/72N(Null)/77/79/82/83/84(DR12)																							
x	DRB1*12:02:01:01(DR12)																							
	DRB1*12:02:01:02/02:01:03/02:01:04/02:01:05/02:01:06/02:01:07/02:02/02:03/02:04/02:05/02:06/02:08/02:09/02:10/13/15/18/19/20/21/23/26/27(DR12)/31N(Null)/32/33/37/43/44/45/50/51/52/55(DR12)/60N(Null)/61/64/65/67/69/71/73(DR12)/74N(Null)/75/76/78/80/81/85(DR12)																							
	DRB1*12:02:07/56(DR12)																							
	DRB1*12:04(DR12)																							
	DRB1*12:14/38/57/58(DR12)																							
	DRB1*12:16:01/16:02/16:03(DR12)																							
	DRB1*12:22/39(DR12)																							
	DRB1*12:49(DR12)																							
	DRB1*12:66(DR12)																							
x	DRB1*13:01:01:01/02:01:01/04/08(DR13)																							
	DRB1*13:01:01:02/01:01:03/01:01:04/01:01:05/01:01:06/01:01:07/01:01:08/01:02/01:03/01:04/01:05/01:06/01:07/01:08/01:09/01:10/01:11/01:12/01:13/01:14/01:15/01:16/01:17/01:18/01:19/01:20/01:21/01:22/01:23/01:24/01:25/01:26/01:27/01:28/01:29/01:30/02:01:02/02:01:03/02:01:04/02:01:05/02:01:06/02:01:07/02:01:08/02:01:09/02:02/02:03/02:04/02:05/02:06/02:07/02:08/02:09/02:10/02:11/02:12/02:13/02:14/02:15/02:16/02:17/102/105/106/107/109/112(DR13)/113N(Null)/117/121/123/124/125/126/127/128/130/131/135/138/139/140/141(DR13)/142N(Null)/143/145/147/148/153/155/16/162/166/168/171:02/173/177/182/184(DR13)/185N(Null)/186/187/190/198(DR13)/200N(Null)/201/202/204/205/207/208/209/210/211/212/213/215/218/22:01/22:02/220/221/222/223/225/226/23:01/23:02/233/234/236/237/238/239/240/241/242:01/242:02/243/244/245/250/251(DR13)/252N(Null)/254(DR13)/255N(Null)/256/257/258/259/260/261/262/263/264/265/266/267(DR13)/268N(Null)/269/27:01/27:02/270/271/272/273/274/275(DR13)/278Q(Null/DR13)/279/28:01/28:02/280/281/282/283/285/287/288/290/291/292/293/294/296/297(DR13)/298N(Null)/300/301/303/304/305/31/32/34/35/36/38/39/40/41/48/51/52/59/61:01/61:02/65/68/69/70/72/73/74/76/79/80/83/84/87/91/92/93/96:01/96:02/97:01/97:02/98/99(DR13)																							
	DRB1*13:01:02/02:02/03:01:02/03:02/03:03/03:04/03:05/03:06/03:07/03:08/03:09/101/110/115/118/12:02/12:03/12:04/121/133(DR13)/137N(Null)/151/152/157/161/163/167/172/173/174/181/188/194(DR13)/200N(Null)/210/211/216/218/219/222/226/227/253/257(DR13)/295N(Null)/30/33:01/33:02/33:03/37/58/66:01/66:02/76/77/81/82/89:01/89:02/90/94:01/94:02/95(DR13)																							
	DRB1*13:01:22/02:12/162/165/183(DR13)/249N(Null)/264(DR13)/289N(Null)/301/39/79(DR13)																							
x	DRB1*13:03:01:01/06/12:01(DR13)																							
x	DRB1*13:05:01/14:01(DR13)																							
	DRB1*13:05:02/05:03/07:01/07:02/100/108/11:01/11:02/111/114/121/132/136/14:02/14:03/149/150/169/173/189/199/20(DR13)/200N(Null)/203(DR13)/21:01/21:02(DR11)/218/229/230(DR13)/24(DR11)/246/247/276/277/284/29/302/42:01/42:02(DR13)/46(DR11)/49(DR13)/50:01/50:02/50:03(DR11)/54(DR14)/62(DR11)/63/71/75/78(DR13)																							
	DRB1*13:09/119/129(DR13)																							
x	DRB1*13:10(DR13)																							
	DRB1*13:100/116/17/175/214(DR13)/54(DR14)/78(DR13)																							
	DRB1*13:103/121/134/160/163/173/180/181/192/199(DR13)/200N(Null)/206/218/224/231/235/25/44/56/60/77/86/88(DR13)																							
	DRB1*13:103/160/163/181/195/248/299/67/77(DR13)																							
	DRB1*13:104/15/19/53/57(DR13)																							
	DRB1*13:120/170/174/176/178/216(DR13)																							
	DRB1*13:122/163/181/228(DR13)/289N(Null)/77(DR13)																							
	DRB1*13:13/146/154/156(DR13)																							
	DRB1*13:144/158/164/18/232/286/47/55(DR13)																							

Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
	DRB1*13:146(DR13)																							
	DRB1*13:159/171:01/179/191/217/45(DR13)																							
	DRB1*13:171:02(DR13)																							
	DRB1*13:178/193/196(DR13)																							
	DRB1*13:193/196(DR13)																							
	DRB1*13:197/43(DR13)																							
	DRB1*13:204/64(DR13)																							
	DRB1*13:26:01/26:02(DR13)																							
	DRB1*13:85(DR13)																							
	DRB1*13:86(DR13)																							
x	DRB1*14:01:01/07:01/54:01:01(DR14)																							
	DRB1*14:01:02/01:03/01:04/01:05/07:02/101/112/113/114/117/118/122/125/129/131/132/133/139/140/142/147/149/150/151/153/157/158/162/163(DR14)/166N(Null)/168/172/178/184/185(DR14)/186(DR6)/189/190/191/192/193(DR14)/197N(Null)/202/204/207/208/213/214/215/216/217/219/225/227/26/32:01/32:02/32:03/35/38:01/38:02/39/54:01:02/54:01:03/54:01:04/54:01:05/54:01:06/54:01:07/54:01:08/54:03/54:04/54:05/54:06/54:07/54:08/54:09/54:10/58/60/62/70/75/82/86/87/88/90(DR14)/92N(Null)/97/99(DR14)																							
x	DRB1*14:02:01:01(DR14)																							
	DRB1*14:02:01:02/02:03/02:04/02:05/02:06/02:07/02:08/02:09/06:04/06:05/06:06/09/165(DR14)/17(DR6)/170/176/177/179/194(DR14)/195N(Null)/198/209/21/212/221/30/33/80(DR14)																							
	DRB1*14:02:02/06:02/06:03/106/108/109/121/13/159/19/20/29/41/47/48/51/83/94(DR14)																							
x	DRB1*14:03:01(DR1403)																							
	DRB1*14:03:02(DR1403)/102/115/12:01/12:02/135/156/24/40/77/85/89/98(DR14)																							
x	DRB1*14:04:01:01(DR1404)/08(DR14)																							
	DRB1*14:04:01:02/04:02/04:03/04:04/04:05/04:06/04:07/04:08(DR1404)/120/125/126:01/126:02/130/138/145/175/180/196/201/205/206(DR14)/210Q(Null/DR14)/211/220/224/23:02/28/31/34/39/50/54:02/54:08/64/71/72(DR14)																							
x	DRB1*14:05:01:01(DR14)																							
	DRB1*14:05:01:02/05:01:03/05:02/05:03/05:04/05:05/100/103/123/127:01/127:02/130/134/14/155/160/167/169/187(DR14)/188N(Null)/23:01/23:03/23:04/36/42/43/44:01/44:02/44:03/45/56/59/64/65/72/91/95/96(DR14)																							
x	DRB1*14:06:01(DR14)																							
x	DRB1*14:10(DR14)																							
	DRB1*14:102/116/136/144/174/181/218/223/226/37/84(DR14)																							
	DRB1*14:104(DR14)/137N(Null)/143/182/203/32:03(DR14)/57(DR4)/69/74(DR14)																							
	DRB1*14:105/128/22/25:01/25:02(DR14)/53(DR13)																							
	DRB1*14:107(DR14)/152N(Null)/199/61/76/79(DR14)																							
	DRB1*14:109/46/48/52(DR14)																							
	DRB1*14:11/148/68:01/68:02/93(DR14)																							
	DRB1*14:110(DR14)																							
	DRB1*14:111/171(DR14)																							
	DRB1*14:115(DR14)																							
	DRB1*14:119/146/200(DR14)																							
	DRB1*14:121/98(DR14)																							
	DRB1*14:124(DR14)																							
	DRB1*14:136(DR14)																							
	DRB1*14:141(DR14)																							
	DRB1*14:15(DR8)																							
	DRB1*14:154(DR14)/18(DR6)/81(DR14)																							
	DRB1*14:16(DR6)																							
	DRB1*14:161(DR14)																							
	DRB1*14:164/173/55(DR14)																							
	DRB1*14:164/55(DR14)																							
	DRB1*14:177(DR14)/195N(Null)																							
	DRB1*14:183(DR14)																							
	DRB1*14:222N(Null)																							
	DRB1*14:27:01/27:02(DR14)																							
	DRB1*14:49(DR14)																							
	DRB1*14:63/67/78(DR14)																							
	DRB1*14:73(DR14)																							

Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	
	DRB1*14:89(DR14)																								
x	DRB1*15:01:01:01:02:01:01:03:01:01:04:01:01:05:01:01:06:01:01:07:01:01:08:01:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:01:18:01:19:01:20:01:21:01:24:01:25:01:26:01:27:01:28:01:29:01:30:01:31:01:32:01:33:01:34:01:35:01:36:01:37:01:38:01:39:01:40:01:41:01:42:02:01:02:02:01:03:02:01:04:02:01:05:02:01:06:02:02:01:02:02:02:02:03:02:04:02:05:02:06:02:07:02:08:02:09:02:10:02:11:02:12:02:13:02:14:02:15:02:16:02:17:02:18:02:19:03:01:02:03:01:03:03:02:03:03:03:04:03:05:04:05:06:01:06:02:06:03:06:04:07:01:07:02:07:03(DR15)/08(DR2)/09/10/101/104:01/104:02/104:03/105:01/105:02/106/107/108/109/11:01/11:02/110/111/112(DR15)/113N(Null)/114/116/118/119/12/121/123/124/125/126/127/128/13/130/131/132/133(DR15)/134N(Null)/135/136(DR15)/137N/138N(Null)/139/14/140/141/142/143/144/145/146/147(DR15)/148N(Null)/149/15:01/15:02/15:03/150/151/152/153(DR15)/154N(Null)/155/156/157(DR15)/159N(Null)/16/160/161/162(DR15)/163N(Null)/164Q(Null/DR15)/165/166/168/169/170/171:01/171:02/172/173/174/175(DR15)/176N(Null)/177/178/179(DR15)/17N(Null)/18(DR15)/180N(Null)/181/182(DR15)/183N(Null)/184/185/186/187/188/189/19/20/21/22/23/24/26/29/30/31:01/31:02/32/33/35/36/37:01/37:02/38/39/40/41/42/43/44/45/46/47/48/49/51/52/53/55/56/57/58/59/60/61/62/63/64/65/67/68/69/70/71/72/73/74/75/76/77/78/79/81/82/83/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99(DR15)																								
	DRB1*15:01:22:01:23/100/103(DR15)/115N(Null)/117/120/122(DR15)/129N(Null)/158/21/25/27/28/34/46(DR15)/50N(Null)/54/66:01/66:02(DR15)/80N(Null)/84(DR15)																								
	DRB1*15:102(DR15)																								
	DRB1*15:103/117/120/122/27/34/54/66:01/66:02/84(DR15)																								
	DRB1*15:167(DR15)																								
x	DRB1*16:01:01:02:01:01(DR16)																								
	DRB1*16:01:02:01:03:01:04:01:05:01:06:02:01:02:02:01:03:02:01:04:02:01:05:02:02:03:02:04(DR16)/03(DR2)/05:01/05:02/07/08/09:01/09:02/11/12(DR16)/13N(Null)/14/15/16/17/18/19/20/22/23/24(DR16)																								
	DRB1*16:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14:01:15:01:16:01:17:02:05:02:06:02:07:02:08:02:09:04:01/04:02/10:01/10:02(DR16)/21N(Null)/25/26/27/28/29/30/31/32/33/34/35/36/37/38:01/38:02/39/40(DR16)/41N(Null)/42/43/44/45/46/47/48/49/50/51/52/53/54/56/57/58(DR16)/59Q(Null/DR16)/60/61(DR16)/62N/63N(Null)/64/65/66/67/68(DR16)																								
	DRB1*16:55N(Null)																								
x	DRB3*01:01:02:01:02(DR52)																								
	DRB3*01:01:02:02:01:02:02:01:02:04:01:02:05:01:02:06:01:03:01:04:01:05:01:06:01:07:01:08:01:09:01:10:01:11:01:12:01:13:01:14/03/04/05/06/07/08/09/10/11/12/13/15/16/17/18/19/20/21/22/23/24/25(DR52)/26N(Null)/27/28/29/30/31/32/33/35/36/37/38/39(DR52)/40:01N/40:02N(Null)/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62:01:01/62:01:02/63/64/65/66/67/68/69/70/71/72(DR52)/73N(Null)/74/75/76(DR52)/77N(Null)/78/79/80(DR52)/81N(Null)/83/84/85/86/87/88/89/90(DR52)																								
	DRB3*01:14(DR52)																								
	DRB3*01:31(DR52)																								
	DRB3*01:34(DR52)																								
	DRB3*01:82(DR52)																								
x	DRB3*02:01:02:01:01/03(DR52)																								
	DRB3*02:02:01:02:02:01:03:02:01:04:02:01:05:02:01:06:02:01:07:02:01:08:02:01:09:02:01:10:02:01:11:02:01:12:02:01:13:02:02:02:03:02:04:02:05:02:06:02:07:02:08:02:09:02:10:02:11:02:12:02:13:02:14:02:15:02:16:02:17:02:18:02:19:02:20:02:21:02:22:02:23:02:24:02:25:02:26:02:27:04:05:01/05:02/06/07/08/09/10/100/101/102/103/104/105/106/107/108(DR52)/109N(Null)/11/110/112/113/114/115/116/117/118/119/12/120(DR52)/121N(Null)/122/123/124(DR52)/125N(Null)/126/127/128/129/13/130/132/133/134/135/136/138/139/14/140/141/142/143/144(DR52)/145N(Null)/146/147/148/149/150/16/17/19/20/21/22:01/22:02/23/24/25/26/28(DR52)/29N(Null)/30/31:01/31:02/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54(DR52)/55N(Null)/56/57/59/60(DR52)/61Q(Null/DR52)/62/63/64/65/66(DR52)/67N(Null)/68/69/70/71/72/73/74/75/76/77/79(DR52)/80N(Null)/81/82/83/84/85/86/87/88/89/90/91/92/93/94(DR52)/95N(Null)/96/97/98/99(DR52)																								



Frq.	Allel / Allele	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
	DRB3*02:111/131(DR52)/137N(Null)/15/27/58/78(DR52)																							
	DRB3*02:18(DR52)													#										
	DRB3*02:27/58(DR52)																							
x	DRB3*03:01:01:01(DR52)																							
	DRB3*03:01:01:02/01:01:03/01:01:04/01:02/01:03:01/01:03:02/01:04/01:05/01:06/01:07/01:08/01:09/01:10/01:11/02/03/04:01/04:02/05/06/07/08/09/10/11/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29(DR52)/30N(Null)/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48(DR52)																							
	DRB3*03:12(DR52)														#									
	DRB3*03:15(DR52)																							
x	DRB4*01:01:01:01/03:01:01(DR53)/03:01:02N(Null)																							
	DRB4*01:01:01:03/01:02/01:03:01:04/01:05/01:06/01:07/01:08/01:09/02/03:01:03:01:04/03:01:05/03:01:06/03:01:07/03:01:08/03:01:09/03:01:10/03:01:11/03:01:12(DR53)/03:01:13N(Null)/03:02/03:03/03:05/03:06/03:07/03:08/03:09/03:10/03:11/03:12/03:13/03:14/03:15/03:16/03:17/03:18/03:19/04/05/06/07:01/07:02/09/10/100/101/103/104/105/106/107/109/111/110/111/112(DR53)/113N(Null)/114(DR53)/115N(Null)/116/117/118/119/12/120(DR53)/121N(Null)/122/123/124/125/126/127(DR53)/128N(Null)/129/13/130/131/132/133/134/135/136/137(DR53)/14N(Null)/15(DR53)/16N(Null)/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37(DR53)/38N(Null)/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53(DR53)/54:01N/54:02N(Null)/55(DR53)/56N/57N(Null)/58/59(DR53)/61N(Null)/63/64(DR53)/65N(Null)/66/67/68/69/70(DR53)/71N(Null)/72/73/74/75/76/77/78/79(DR53)/80N(Null)/81/82/83(DR53)/84N(Null)/85/86/87/89/90/91/92/93/94/95/96/97/98/99(DR53)																							
	DRB4*01:03:04/03:13/08/10/102(DR53)/108N(Null)/112/116/129/32/44/46/60/62/63/73/78/88(DR53)																							
	DRB4*02:01N(Null)																							
	DRB4*03:01N(Null)																							
x	DRB5*01:01:01:01/02:01(DR51)/08:01N(Null)																							
	DRB5*01:01:01:02/01:01:03/01:01:04/01:02/01:03:01/01:04/01:05/01:06/01:07/02:02/03/04/05/06/07(DR51)/08:02N(Null)/09(DR51)/10N(Null)/11/12/13/14/15/16/17/18/19/20/21/22:01/22:02/23/24/25/26(DR51)/27N(Null)/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47(DR51)/48N/49N(Null)/51(DR51)/52N/53N(Null)/54/55/56/57(DR51)/58N(Null)/59/60/61/62/63:01/63:02/64/65/66(DR51)/67N/68N(Null)/69/70(DR51)/71N(Null)/72/73/74/75/76/77/78/80(DR51)/81N(Null)/82(DR51)/83N(Null)/84/85/86/87/88/89/90/91(DR51)/92N(Null)/93/94/95/96/98/99(DR51)																							
	DRB5*01:39/50(DR51)/79Q(Null/DR51)/97(DR51)																							
x	DRB5*02:02:01(DR51)																							
	DRB5*02:02:02:03/03/04/05/06/07/08/09/10/11/12/13/14/15/16/17/18(DR51)/19N(Null)/20/21/22/23/24(DR51)/25N/26N(Null)/27/28/29(DR51)																							

- # manchmal schwache Amplifikation, sometimes weak amplification
- x häufige Allele, frequent alleles

Frequenzangaben / Frequencies

Quelle: Schreuder et. al.: The HLA Dictionary 2004; Tissue Antigens 2005: 65: 1-55
 Allele die in der Studie mit einer Häufigkeit von größer gleich 0,01% gefunden wurden sind in der Frequenzspalte als häufig markiert
 Source: Schreuder et. al.: HLA Dictionary 2004; Tissue Antigens 2005: 65: 1-55
 Alleles that were found with an occurrence higher or equal to 0,01% are marked in the frequency column

