

B-cell Line Exchange #264

JULY 1, 2016

B-cell Lines 527-528

The results for B-cell Line Exchange #264 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 8. We would like to express our appreciation to Nancy Goeken, University of Iowa, Iowa City, Fu-Meei Robbins, National Institutes of Health, Bethesda, and to Helen Bass, Jane Rowlands, and Tracey Reese, Welsh Blood Service,

Pontyclun, for generously donating the valuable reference cells examined in this exchange.

The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <http://bioinformatics.nmdp.org/>.

Ter-527. The consensus type for this sample is DRB1*03:01-DRB1*13:06-DRB3*01:01-DQA1*01:03-DQA1*05:01-DQB1*02:01-DQB1*06:03-DPA1*01:03-DPA1*02:01-DPB1*01:01-DPB1*03:01/A*01:01-A*32:01-B*08:01-B*44:02-C*05:01-C*07:01. No race information was available for this cell. One likely class II association in this cell is DRB1*03:01-DRB3*01:01-DQA1*05:01-DQB1*02:01, observed numerous times in the exchange, most recently in Ter 483 (same as Ter 298, 278, and 217) and Ter 477 (same as Ter 402 and 352). The other likely association present may then be DRB1*13:06-DRB3*01:01-DQA1*01:03-DQB1*06:03.

This cell is Ter331, a reference cell for DRB1*13:06. It was previously studied in the exchange as Ter 406 (2008) and Ter 331 (2004), as astutely noted by Chen, Rao, and Tiercy. In this present retyping, DRB1*13:06 was assigned by 100% of labs reporting at high resolution. Although the ethnicity of this cell is unknown, DRB1*13:06 is found to be observed exclusively in Hispanics, with HF=0.00025. DRB1*03:01 (100%) was reported as the second DRB1 type, with 7 labs reporting DRB1*03:01:01. A*01:01 (100%), A*32:01 (100%), B*08:01 (100%), B*44:02 (100%), C*05:01 (100%), and C*07:01 (94%) were the assigned class I types. A*01:01:01, A*32:01:01, B*08:01:01, B*44:02:01, C*05:01:01, and C*07:01:01 were each assigned by 5 labs.

Ter-528. The consensus type for this sample from a Caucasian donor is DRB1*04:01-DRB1*13:17-DRB3*02:02-DRB4*01:03-DQA1*03:01-DQA1*04:01-DQB1*03:02-DQB1*04:02-DPA1*01:03-DPB1*04:01-DPB1*04:02/A*02:01-A*32:01-B*15:01-C*03:03. One likely class II association in this cell is DRB1*04:01-DRB4*01:03-DQA1*03:01-DQB1*03:02, observed in previous exchange cells, Ter 517 (same as Ter 385) and Ter 441 (same Ter 432 and 347). The other likely association in this cell is DRB1*13:17-DRB3*02:02-DQA1*04:01-DQB1*04:02.

This cell is R.B, a reference cell for DRB1*13:17. It was previously examined in the exchange as Ter 405 (2008) and Ter 351 (2005), as correctly identified by Chen, Rao, and Tiercy. In this present retyping, DRB1*13:17 was reported in complete consensus by labs reporting at high resolution. By serology, 1 lab reported DR8 and the other DR13. The discrepancy in the serology results concurs with data showing that DRB1*13:17 resulted "from a reciprocal recombination event between DR8 and DR13 alleles" (1). DRB1*04:01 was reported as the second DRB1 type, with 9 labs reporting DRB1*04:01:01. A*02:01, A*32:01, and B*15:01 were reported in complete consensus. A*02:01:01 and A*32:01:01 were each assigned by 6 labs, and B*15:01:01:01 was assigned by 5 labs (3 NGS, 2 SBT). C*03:03 was reported by 95% as the sole C-locus type, with NGS assigning C*03:03:01.

References:

1. Rosenberg SM, Wollenzien TF, Robbins FM, et al. Yet another novel HLA DRB1 allele (DRB1*1317) and its misidentification by PCR-SSP. Tissue Antigens 1995;46:128-130.

NEXT MAILING DATE: August 3, 2016
Arlene Locke, David Gjertson, Qiheng Zhang, and Elaine F. Reed