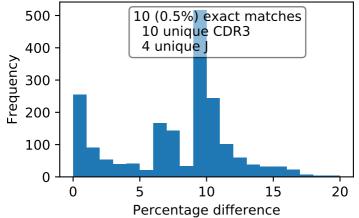
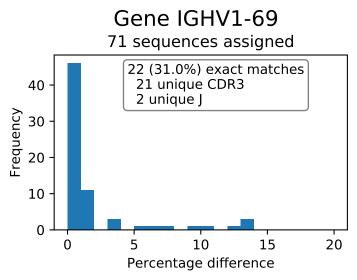
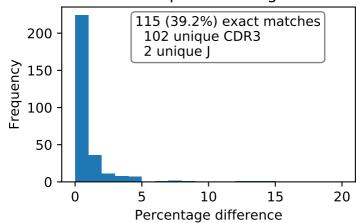
Gene IGHV1-2 1,911 sequences assigned



Gene IGHV1-46 1,070 sequences assigned 500 302 (28.2%) exact matches 253 unique CDR3 400 5 unique J Frequency 300 200 100 Percentage difference

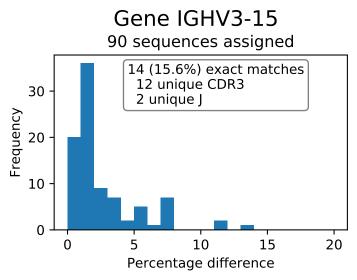


Gene IGHV1-69D 293 sequences assigned

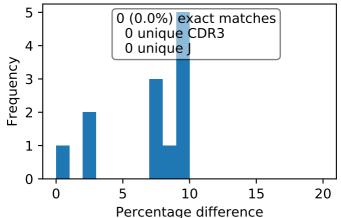


Gene IGHV3-11 7 sequences assigned 3 1 (14.3%) exact matches 1 unique CDR3 1 unique J Frequency 5 Percentage difference

Gene IGHV3-13 8 sequences assigned 6 0 (0.0%) exact matches 0 unique CDR3 0 unique J Frequency Percentage difference



Gene IGHV3-20 12 sequences assigned



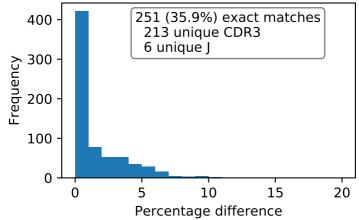
Gene IGHV3-21 67 sequences assigned 25 (37.3%) exact matches 20 unique CDR3 30 2 unique J Frequency 20 10

Percentage difference

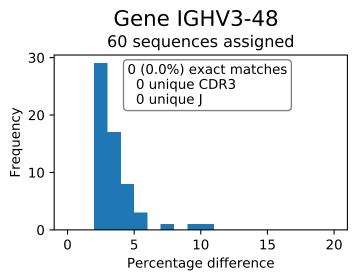
Gene IGHV3-23 18 sequences assigned 8 0 (0.0%) exact matches 0 unique CDR3 Frequency 9 0 unique J

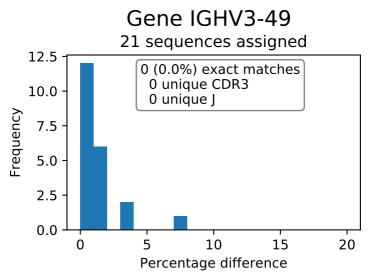
Percentage difference

Gene IGHV3-30 699 sequences assigned

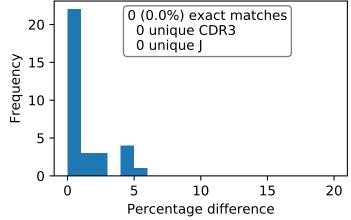


Gene IGHV3-33 77 sequences assigned 32 (41.6%) exact matches 40 26 unique CDR3 2 unique J Frequency N 00 0 10 Percentage difference

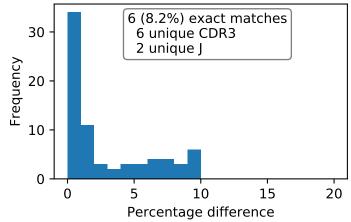


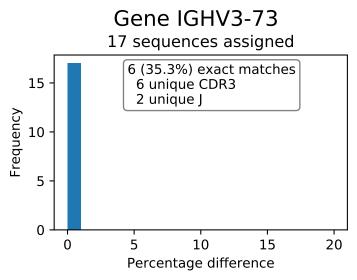


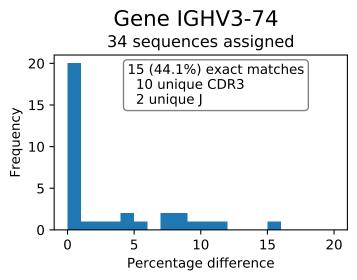
Gene IGHV3-53 33 sequences assigned 0 (0.0%) exact matches



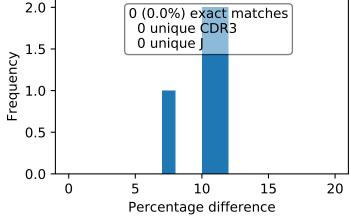
Gene IGHV3-7 73 sequences assigned



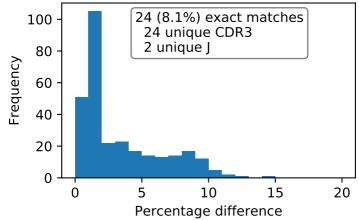




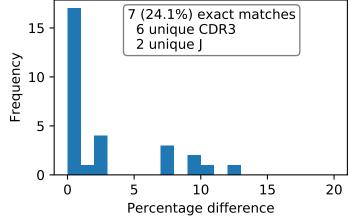
Gene IGHV4-28 93 sequences assigned



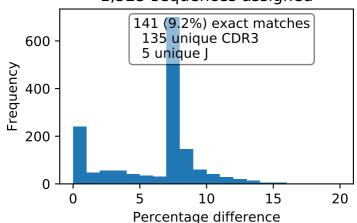
Gene IGHV4-39 298 sequences assigned



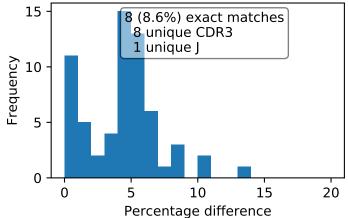
Gene IGHV4-4 29 sequences assigned 7 (24.1%) exact matches



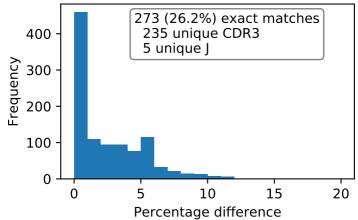
Gene IGHV4-59 1,525 sequences assigned



Gene IGHV4-61 93 sequences assigned



Gene IGHV5-51 1,043 sequences assigned



Gene IGHV6-1 161 sequences assigned 49 (30.4%) exact matches 31 unique CDR3 2 unique J

