

Table S6. Most frequent TCR β V-D-J sequence of V β 22-negative ERBB2IP-mutation-reactive T cells*

TCR V β	V-D-J nucleotide sequence (CDR3 highlighted)	V-D-J amino acid sequence (CDR3 highlighted)	Number of TOPO- TA clones with indicated V-D-J
V β 5.2 (TRBV5-6)	GACGCTGGAGTCACCCAAAGTCCCACACACCTGAT CAAAACGAGAGGACAGCAAGTGACTCTGAGATGC TCTCCTAAGTCTGGGCATGACACTGTGTCCTGGTAC CAACAGGCCCTGGGTCAGGGGCCCCAGTTTATCTT TCAGTATTATGAGGAGGAAGAGAGACAGAGAGGC AACTTCCCTGATCGATTCTCAGGTCACCAGTTCCT AACTATAGCTCTGAGCTGAATGTGAACGCCTTGT GCTGGGGGACTCGGCCCTCTATCTCTGTGCCAGCA GCAAAGGCCCGGGAGGCAACTACGAGCAGTACTT CGGGCCGGGCACCAGGCTCACGGTCACAG	DAGVTQSPTHLIKTR GQQVTLRCSPKSGHD TVSWYQQALGQGPQ FIFQYEEEEERQRGNF PDRFSGHQFPNYSSE LNVNALLGDSALYLC ASSKGPGGNYEQYF GPGTRLTVT	3/7

* V β 22-negative cells that upregulated OX40 upon stimulation with mutated ERBB2IP were sorted and expanded. RNA from these cells was then isolated and underwent 5'RACE with TCR- β constant chain primers to identify the expressed TCR-V β sequences. TOPO-TA cloning was performed on the PCR products and individual colonies were then sequenced. Flow cytometry demonstrated that 40-50% of these T cells were V β 5.2 (TRBV5-6). By Sanger sequencing, 3/7 TOPO-TA colonies were V β 5.2 (TRBV5-6) with the indicated sequence above.