

SEQUENCING DATA

α_1 CAVTGGDKLIF
 α_2 CALDGDKIIF
 β_1 CASGLARAEQYF
 β_2 CASSEGDKVIF

α_1 CAVTGGDKLIF
 α_3 CAVTYGYLNF
 α_4 CALTASGLTF
 β_1 CASGLARAEQYF
 β_2 CASSHSRYEQYF
 β_3 CSEVHTARTQYF

bagpipe()

CANDIDATE PAIRS

$\alpha_1\beta_1$ $\alpha_4\beta_7$

$\alpha_2\beta_1$ $\alpha_8\beta_1$

$\alpha_3\beta_2$ $\alpha_9\beta_1$

$\alpha_6\beta_3$ $\alpha_5\beta_2$

$\alpha_4\beta_6$ $\alpha_8\beta_6$

freq_estimate()

ESTIMATE FREQUENCIES OF CANDIDATE CLONES

FREQUENCY

$\alpha_1\beta_1$ 0.13

$\alpha_2\beta_1$ 0.0002

$\alpha_8\beta_1$ 0.06

$\alpha_6\beta_3$ 0.009

dual_top()

dual_tail()

FREQUENCY ESTIMATION OF SINGLE AND DUAL CLONES

	FREQUENCY	95%-CI
$\alpha_1\alpha_2\beta_1$	0.13	0.1-0.16
$\alpha_2\beta_1$	0.0002	2e-4 - 2.1e-4
$\alpha_3\beta_2$	0.06	.056-.061
$\alpha_6\beta_3$	0.009	.009-.011

freq_estimate()

DUAL VS BETA-SHARING DISCRIMINATION

