

# RELAX Combined Report

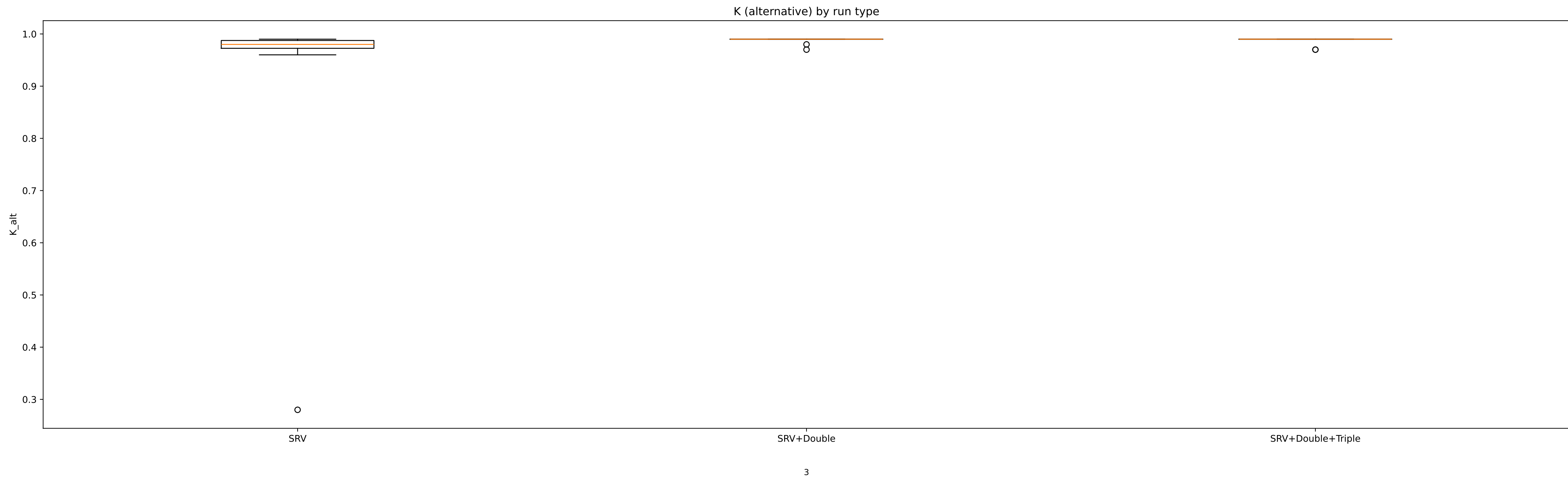
SRV vs SRV+Double vs SRV+Double+Triple

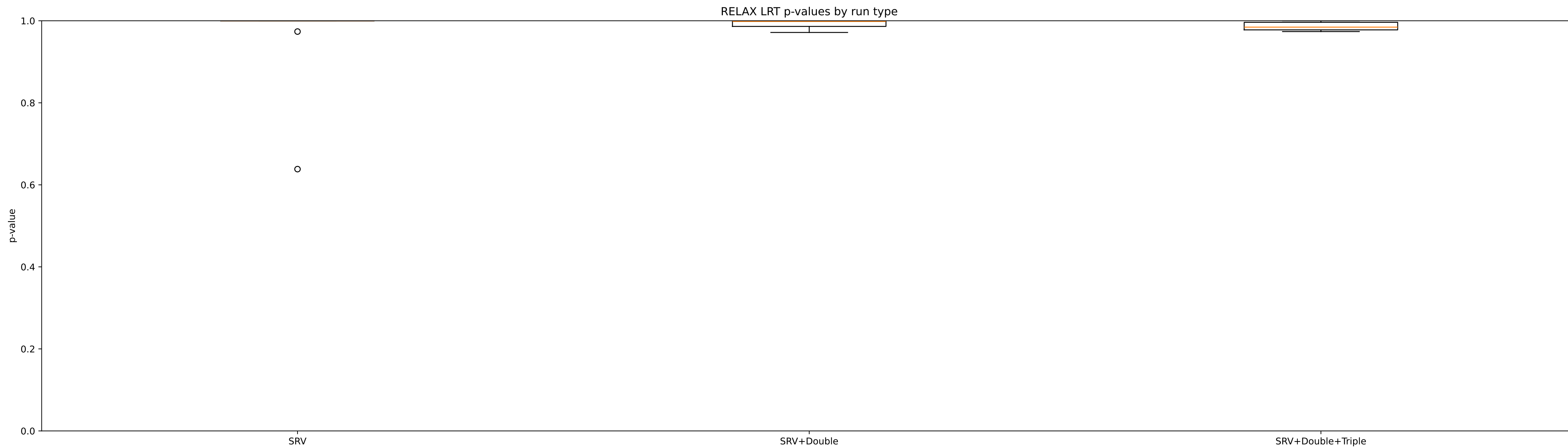
Includes:

- Run-type summary
- Boxplots: K, p-values, 2H/3H
- Full omega/SRV/multihit tables (column-paged)

Run-type summary statistics

| p_median | p_min  | p_max | K_median | K_min | K_max | omega_ref_med<br>ian | omega_test_med<br>ian | warnings_count | 2H_reference_m<br>edian | 2H_test_median |
|----------|--------|-------|----------|-------|-------|----------------------|-----------------------|----------------|-------------------------|----------------|
| 1.0      | 0.6383 | 1.0   | 0.98     | 0.28  | 0.99  | 0.3635               | 0.3602                | 10             | nan                     | nan            |
| 0.9984   | 0.9715 | 1.0   | 0.99     | 0.97  | 0.99  | 0.3635               | 0.3602                | 10             | 0.0                     | 0.0            |
| 0.9845   | 0.9737 | 1.0   | 0.99     | 0.97  | 0.99  | 0.3635               | 0.3602                | 10             | 0.0                     | 0.0            |



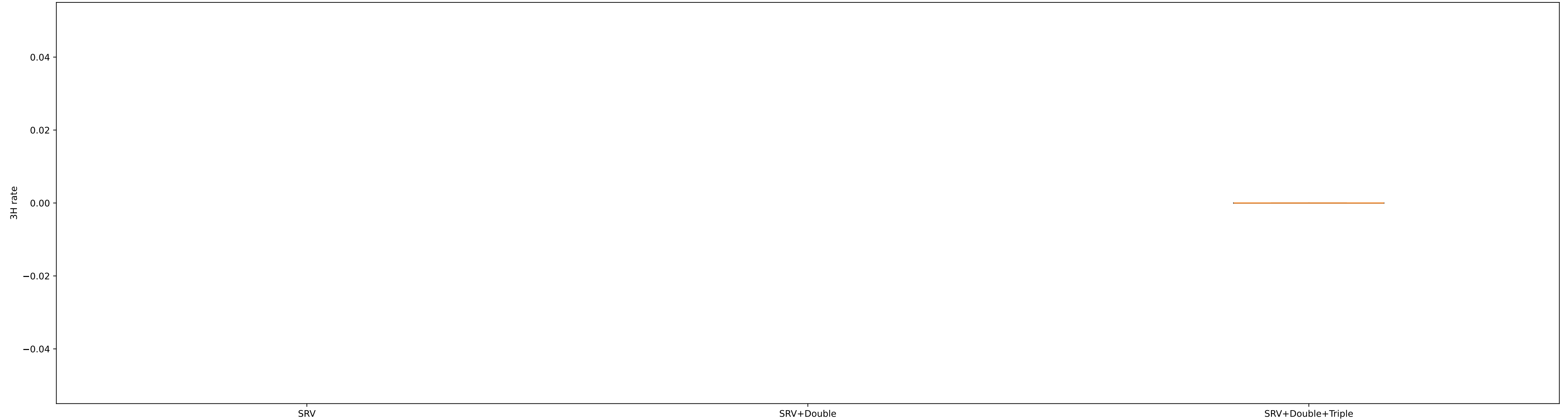


2H rates (reference) by run type





3H rates (reference) by run type



3H rates (test) by run type





|  | replicate | p_value | K_alt | global_dNdS_reference | global_dNdS_test |  |
|--|-----------|---------|-------|-----------------------|------------------|--|
|  | 1         | 1.0     | 0.98  | 0.3635                | 0.3602           |  |
|  | 2         | 1.0     | 0.98  | 0.3635                | 0.3602           |  |
|  | 3         | 0.6383  | 0.28  | 0.3635                | 0.3602           |  |
|  | 4         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 5         | 1.0     | 0.97  | 0.3635                | 0.3602           |  |
|  | 6         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 7         | 1.0     | 0.98  | 0.3635                | 0.3602           |  |
|  | 8         | 0.9737  | 0.96  | 0.3635                | 0.3602           |  |
|  | 9         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 10        | 1.0     | 0.98  | 0.3635                | 0.3602           |  |

|  | replicate | p_value | K_alt | global_dNdS_reference | global_dNdS_test |  |
|--|-----------|---------|-------|-----------------------|------------------|--|
|  | 1         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 2         | 0.981   | 0.99  | 0.3635                | 0.3602           |  |
|  | 3         | 1.0     | 0.97  | 0.3635                | 0.3602           |  |
|  | 4         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 5         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 6         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 7         | 0.9862  | 0.99  | 0.3635                | 0.3602           |  |
|  | 8         | 0.9967  | 0.99  | 0.3635                | 0.3602           |  |
|  | 9         | 0.9715  | 0.99  | 0.3635                | 0.3602           |  |
|  | 10        | 0.9865  | 0.98  | 0.3635                | 0.3602           |  |

|  | replicate | p_value | K_alt | global_dNdS_reference | global_dNdS_test |  |
|--|-----------|---------|-------|-----------------------|------------------|--|
|  | 1         | 0.9769  | 0.97  | 0.3635                | 0.3602           |  |
|  | 2         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 3         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 4         | 0.9806  | 0.99  | 0.3635                | 0.3602           |  |
|  | 5         | 0.9737  | 0.99  | 0.3635                | 0.3602           |  |
|  | 6         | 0.9843  | 0.99  | 0.3635                | 0.3602           |  |
|  | 7         | 0.9847  | 0.99  | 0.3635                | 0.3602           |  |
|  | 8         | 0.9848  | 0.99  | 0.3635                | 0.3602           |  |
|  | 9         | 1.0     | 0.99  | 0.3635                | 0.3602           |  |
|  | 10        | 0.9749  | 0.97  | 0.3635                | 0.3602           |  |

|  |           |  |                        |           |        |            |  |
|--|-----------|--|------------------------|-----------|--------|------------|--|
|  | test      |  | Negative selection     | 0.205     | 87.732 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.201     | 87.732 | SRV+Double |  |
|  | test      |  | Neutral evolution      | 1.0       | 8.266  | SRV+Double |  |
|  | test      |  | Neutral evolution      | 1.0       | 8.266  | SRV+Double |  |
|  | reference |  | Diversifying selection | 2.688     | 4.235  | SRV+Double |  |
|  | reference |  | Negative selection     | 0.193     | 86.661 | SRV+Double |  |
|  | reference |  | Neutral evolution      | 1.0       | 9.105  | SRV+Double |  |
|  | test      |  | Diversifying selection | 2.688     | 4.235  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.193     | 86.661 | SRV+Double |  |
|  | test      |  | Neutral evolution      | 1.0       | 9.105  | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.895     | 10.708 | SRV+Double |  |
|  | reference |  | Negative selection     | 0.0       | 6.019  | SRV+Double |  |
|  | reference |  | Negative selection     | 0.204     | 83.273 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.886     | 10.708 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.895     | 10.708 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 6.019  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.206     | 83.273 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 6.019  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.204     | 83.273 | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.873     | 10.8   | SRV+Double |  |
|  | reference |  | Negative selection     | 0.0       | 6.03   | SRV+Double |  |
|  | reference |  | Negative selection     | 0.203     | 83.17  | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.873     | 10.8   | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 6.03   | SRV+Double |  |
|  | test      |  | Negative selection     | 0.203     | 83.17  | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.931     | 10.358 | SRV+Double |  |
|  | reference |  | Negative selection     | 0.005     | 5.897  | SRV+Double |  |
|  | reference |  | Negative selection     | 0.206     | 83.745 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.916     | 10.358 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.931     | 10.358 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.005     | 5.897  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.21      | 83.745 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.005     | 5.897  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.206     | 83.745 | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.915     | 10.395 | SRV+Double |  |
|  | reference |  | Negative selection     | 0.0       | 5.903  | SRV+Double |  |
|  | reference |  | Negative selection     | 0.206     | 83.703 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.915     | 10.395 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 5.903  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.206     | 83.703 | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.852     | 11.105 | SRV+Double |  |
|  | reference |  | Negative selection     | 0.0       | 5.758  | SRV+Double |  |
|  | reference |  | Negative selection     | 0.2       | 83.137 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.842     | 11.105 | SRV+Double |  |
|  | test      |  | Diversifying selection | 1.852     | 11.105 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 5.758  | SRV+Double |  |
|  | test      |  | Negative selection     | 0.203     | 83.137 | SRV+Double |  |
|  | test      |  | Negative selection     | 0.0       | 5.758  | SRV+Double |  |
|  | test      |  | Negative selection     | 12<br>0.2 | 83.137 | SRV+Double |  |
|  | reference |  | Diversifying selection | 1.852     | 11.114 | SRV+Double |  |

SRV rate classes (all) (cols 1-6/6)

|  | class_id | syn_rate | proportion_per cent | run_type |  |
|--|----------|----------|---------------------|----------|--|
|  | 1        | 0.216    | 20.382              | SRV      |  |
|  | 2        | 0.227    | 17.737              | SRV      |  |
|  | 3        | 1.48     | 61.881              | SRV      |  |
|  | 1        | 0.208    | 11.864              | SRV      |  |
|  | 2        | 0.213    | 25.518              | SRV      |  |
|  | 3        | 1.471    | 62.618              | SRV      |  |
|  | 1        | 0.0      | 23.172              | SRV      |  |
|  | 2        | 0.813    | 14.366              | SRV      |  |
|  | 3        | 1.414    | 62.462              | SRV      |  |
|  | 1        | 0.205    | 35.047              | SRV      |  |
|  | 2        | 0.208    | 1.867               | SRV      |  |
|  | 3        | 1.465    | 63.086              | SRV      |  |
|  | 1        | 0.203    | 0.581               | SRV      |  |
|  | 2        | 0.212    | 36.802              | SRV      |  |
|  | 3        | 1.47     | 62.616              | SRV      |  |
|  | 1        | 0.215    | 11.1                | SRV      |  |
|  | 2        | 0.223    | 26.9                | SRV      |  |
|  | 3        | 1.478    | 61.999              | SRV      |  |
|  | 1        | 0.219    | 18.937              | SRV      |  |
|  | 2        | 0.221    | 19.121              | SRV      |  |
|  | 3        | 1.479    | 61.941              | SRV      |  |
|  | 1        | 0.224    | 38.238              | SRV      |  |
|  | 2        | 0.232    | 0.001               | SRV      |  |
|  | 3        | 1.481    | 61.762              | SRV      |  |
|  | 1        | 0.204    | 30.972              | SRV      |  |
|  | 2        | 0.207    | 5.915               | SRV      |  |
|  | 3        | 1.465    | 63.113              | SRV      |  |
|  | 1        | 0.139    | 0.0                 | SRV      |  |
|  | 2        | 0.206    | 36.964              | SRV      |  |
|  | 3        | 1.466    | 63.036              | SRV      |  |

