

# SNiPacard

## Block annotations

### Block info

|               |  |
|---------------|--|
| genomic range | chr1:160,759,519-160,767,737 <i>e!</i> |
| block size    | 8,219 bp                               |
| variant count | 7 variants                             |

### Basic features

| Conservation/deleteriousness |                                | Linked genes                  |                                  |
|------------------------------|--------------------------------|-------------------------------|----------------------------------|
| phyloP                       | $\mu = -0.349$ [-1.062 – 0.48] | gene(s) hit or close-by       | LY9 <i>e!</i>                    |
| phastCons                    | $\mu = 0.006$ [0 – 0.034]      | eQTL gene(s)                  | LY9 <i>e!</i> , SLAMF7 <i>e!</i> |
| GERP++                       | $\mu = -0.668$ [-2.19 – 0.577] | potentially regulated gene(s) | -                                |
| CADD score                   | $\mu = 4.528$ [0.201 – 10.73]  | disease gene(s)               | -                                |

## Direct effect on regulation

### cis-eQTL

| gene             | transcript                | probe                  | tissue | min(statistic) (type)           | source                      | variant(s) |
|------------------|---------------------------|------------------------|--------|---------------------------------|-----------------------------|------------|
| SLAMF7 <i>e!</i> | ENST00000368043 <i>e!</i> | ILMN_1710923 <i>e!</i> | blood  | 1.14×10 <sup>-7</sup> (p-value) | MuTHER consortium <i>!M</i> | 2          |
| SLAMF7 <i>e!</i> | ENST00000368042 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000458602 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000444090 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000441662 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000621377 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000359331 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000484221 <i>e!</i> |                        |        |                                 |                             |            |
| SLAMF7 <i>e!</i> | ENST00000458104 <i>e!</i> |                        |        |                                 |                             |            |
| LY9 <i>e!</i>    | ENST00000392203 <i>e!</i> | ILMN_1731928 <i>e!</i> | b-cell | 1.91×10 <sup>-5</sup> (p-value) | Fairfax et al. <i>!M</i>    | 1          |
| LY9 <i>e!</i>    | ENST00000263285 <i>e!</i> |                        |        |                                 |                             |            |
| LY9 <i>e!</i>    | ENST00000368037 <i>e!</i> |                        |        |                                 |                             |            |
| LY9 <i>e!</i>    | ENST00000368035 <i>e!</i> |                        |        |                                 |                             |            |

## Putative effect on regulation

### Regulatory feature cluster

| element id   | variant(s) | tissue/cell                                      | factors  |
|--|------------|--|--|
| ENSR00000167128 <i>e!</i><br>(open chromatin region) | 1          | blood (GM12878)<br>blood (K562)<br>breast (HMEC) | H3K4me1, DNase1, H3K4me3, H3K27ac, H3K4me2, H3K9ac<br>H3K27me3<br>DNase1 |

### Variation proximal to gene

| gene          | variant type          | min(distance) | transcript                | RefSeq id      | protein                   | variant(s) |
|---------------|-----------------------|---------------|---------------------------|----------------|---------------------------|------------|
| LY9 <i>e!</i> | upstream gene variant | 1165          | ENST00000368037 <i>e!</i> | NM_001261456.1 | ENSP00000357016 <i>e!</i> | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1302          | ENST00000485624 <i>e!</i> | ?              | ?                         | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1203          | ENST00000392203 <i>e!</i> | NM_001261457.1 | ENSP00000376039 <i>e!</i> | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1197          | ENST00000474998 <i>e!</i> | ?              | ENSP00000476321 <i>e!</i> | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1299          | ENST00000471816 <i>e!</i> | ?              | ?                         | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1290          | ENST00000480837 <i>e!</i> | ?              | ?                         | 4          |
| LY9 <i>e!</i> | upstream gene variant | 1278          | ENST00000368039 <i>e!</i> | NM_001033667.2 | ENSP00000357018 <i>e!</i> | 4          |

|               |                       |      |                           |             |                           |   |
|---------------|-----------------------|------|---------------------------|-------------|---------------------------|---|
| LY9 <i>e!</i> | upstream gene variant | 1291 | ENST00000490902 <i>e!</i> | ?           | ENSP00000473643 <i>e!</i> | 4 |
| LY9 <i>e!</i> | upstream gene variant | 1249 | ENST00000263285 <i>e!</i> | NM_002348.3 | ENSP00000263285 <i>e!</i> | 4 |

### Putative effect on transcript

#### Synonymous coding variant

| gene          | affected transcript       | RefSeq id | protein                   | AA's | exchanged codons | variant(s) |
|---------------|---------------------------|-----------|---------------------------|------|------------------|------------|
| LY9 <i>e!</i> | ENST00000474998 <i>e!</i> | ?         | ENSP00000476321 <i>e!</i> | S    | tcT/tcC          | 1          |

#### Intron variant

| gene          | affected transcript       | RefSeq id      | protein                   | variant(s) |
|---------------|---------------------------|----------------|---------------------------|------------|
| LY9 <i>e!</i> | ENST00000368037 <i>e!</i> | NM_001261456.1 | ENSP00000357016 <i>e!</i> | 2          |
| LY9 <i>e!</i> | ENST00000485624 <i>e!</i> | ?              | ?                         | 2          |
| LY9 <i>e!</i> | ENST00000392203 <i>e!</i> | NM_001261457.1 | ENSP00000376039 <i>e!</i> | 2          |
| LY9 <i>e!</i> | ENST00000474998 <i>e!</i> | ?              | ENSP00000476321 <i>e!</i> | 2          |
| LY9 <i>e!</i> | ENST00000471816 <i>e!</i> | ?              | ?                         | 2          |
| LY9 <i>e!</i> | ENST00000480837 <i>e!</i> | ?              | ?                         | 2          |
| LY9 <i>e!</i> | ENST00000368039 <i>e!</i> | NM_001033667.2 | ENSP00000357018 <i>e!</i> | 2          |
| LY9 <i>e!</i> | ENST00000490902 <i>e!</i> | ?              | ENSP00000473643 <i>e!</i> | 2          |
| LY9 <i>e!</i> | ENST00000263285 <i>e!</i> | NM_002348.3    | ENSP00000263285 <i>e!</i> | 2          |

