

IMGT/V-QUEST reference directory release 202038-1 (14 September 2020)

1 - Number of IMGT IG and TR genes and alleles per species or taxon

2 - Number of IMGT IG genes and alleles per species or taxon and IMGT group

3 - Number of IMGT TR genes and alleles per species or taxon

1 - Number of IMGT IG and TR genes and alleles per species or taxon

| Latin name | Species or taxon | IG genes | IG alleles | TR genes | TR alleles | Nb of genes | Nb of alleles |
|---------------------------------|---------------------|----------|------------|----------|------------|-------------|---------------|
| <i>Aotus nancymaae</i> | Mas-night-monkey | 0 | 0 | 65 | 79 | 65 | 79 |
| <i>Macaca mulatta</i> | Rhesus-monkey | 271 | 276 | 219 | 239 | 490 | 515 |
| <i>Vicugna pacos</i> | alpaca | 99 | 99 | 0 | 0 | 99 | 99 |
| <i>Bos taurus</i> | bovine | 114 | 145 | 287 | 394 | 401 | 539 |
| <i>Camelus dromedarius</i> | camel | 18 | 18 | 56 | 59 | 74 | 77 |
| <i>Felis catus</i> | cat | 80 | 80 | 178 | 178 | 258 | 258 |
| <i>Ictalurus punctatus</i> | catfish | 42 | 42 | 0 | 0 | 42 | 42 |
| <i>Gallus gallus</i> | chicken | 118 | 140 | 0 | 0 | 118 | 140 |
| | chondrichthyes | 354 | 354 | 0 | 0 | 354 | 354 |
| <i>Gadus morhua</i> | cod | 39 | 76 | 0 | 0 | 39 | 76 |
| <i>Macaca fascicularis</i> | crab-eating-macaque | 135 | 135 | 0 | 0 | 135 | 135 |
| <i>Canis lupus familiaris</i> | dog | 218 | 225 | 170 | 170 | 388 | 395 |
| <i>Tursiops truncatus</i> | dolphin | 0 | 0 | 91 | 98 | 91 | 98 |
| <i>Mustela putorius furo</i> | ferret | 0 | 0 | 40 | 40 | 40 | 40 |
| <i>Capra hircus</i> | goat | 53 | 53 | 0 | 0 | 53 | 53 |
| <i>Equus caballus</i> | horse | 125 | 143 | 0 | 0 | 125 | 143 |
| <i>Homo sapiens</i> | human | 278 | 683 | 216* | 388* | 494 | 1071 |
| <i>Mus musculus</i> | mouse | 458 | 641 | 235* | 441* | 693 | 1082 |
| | nonhuman-primates | 0 | 0 | 144 | 160 | 144 | 160 |
| <i>Sus scrofa</i> | pig | 63 | 88 | 51 | 51 | 114 | 139 |
| <i>Ornithorhynchus anatinus</i> | platypus | 59 | 59 | 0 | 0 | 59 | 59 |
| <i>Oryctolagus cuniculus</i> | rabbit | 175 | 193 | 210 | 227 | 385 | 420 |
| <i>Rattus norvegicus</i> | rat | 453 | 455 | 0 | 0 | 453 | 455 |
| <i>Salmo salar</i> | salmon | 185 | 201 | 0 | 0 | 185 | 201 |
| <i>Ovis aries</i> | sheep | 107 | 125 | 416 | 492 | 523 | 617 |
| | teleostei | 585 | 652 | 0 | 0 | 585 | 652 |
| <i>Oncorhynchus mykiss</i> | trout | 132 | 140 | 56 | 56 | 188 | 196 |
| <i>Danio rerio</i> | zebrafish | 74 | 74 | 281* | 424* | 355 | 498 |

* TRAV/DV genes and alleles present in both TRAV and in TRDV reference directories are counted only once in total number of TR genes and alleles.

2 - Number of IMGT IG genes and alleles per species or taxon and IMGT group

| Latin name | Species or taxon | Locus | IGH | | | IGK | | IGL | | IGI | | Total |
|------------|------------------|------------|------|------|------|------|------|------|------|------|------|-------|
| | | IMGT group | IGHV | IGHD | IGHJ | IGKV | IGKJ | IGLV | IGLJ | IGIV | IGIJ | |

| | | | | | | | | | | | | |
|-------------------------------|---------------------|-------------------|-----|-----|-----|-----|---|-----|----|---|---|-----|
| <i>Aotus nancymaae</i> | Mas-night-monkey | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Macaca mulatta</i> | Rhesus-monkey | Number of genes | 23 | 32 | 7 | 103 | 5 | 95 | 6 | 0 | 0 | 271 |
| | | Number of alleles | 23 | 32 | 8 | 103 | 5 | 99 | 6 | 0 | 0 | 276 |
| <i>Vicugna pacos</i> | alpaca | Number of genes | 84 | 8 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 99 |
| | | Number of alleles | 84 | 8 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 99 |
| <i>Bos taurus</i> | bovine | Number of genes | 15 | 23 | 12 | 11 | 5 | 38 | 10 | 0 | 0 | 114 |
| | | Number of alleles | 28 | 23 | 18 | 11 | 5 | 50 | 10 | 0 | 0 | 145 |
| <i>Camelus dromedarius</i> | camel | Number of genes | 0 | 0 | 0 | 13 | 5 | 0 | 0 | 0 | 0 | 18 |
| | | Number of alleles | 0 | 0 | 0 | 13 | 5 | 0 | 0 | 0 | 0 | 18 |
| <i>Felis catus</i> | cat | Number of genes | 0 | 0 | 0 | 14 | 5 | 49 | 12 | 0 | 0 | 80 |
| | | Number of alleles | 0 | 0 | 0 | 14 | 5 | 49 | 12 | 0 | 0 | 80 |
| <i>Ictalurus punctatus</i> | catfish | Number of genes | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| | | Number of alleles | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| <i>Gallus gallus</i> | chicken | Number of genes | 84 | 4 | 1 | 0 | 0 | 28 | 1 | 0 | 0 | 118 |
| | | Number of alleles | 91 | 4 | 1 | 0 | 0 | 43 | 1 | 0 | 0 | 140 |
| | chondrichthyes | Number of genes | 108 | 132 | 114 | 0 | 0 | 0 | 0 | 0 | 0 | 354 |
| | | Number of alleles | 108 | 132 | 114 | 0 | 0 | 0 | 0 | 0 | 0 | 354 |
| <i>Gadus morhua</i> | cod | Number of genes | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| | | Number of alleles | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| <i>Macaca fascicularis</i> | crab-eating-macaque | Number of genes | 88 | 40 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| | | Number of alleles | 88 | 40 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| <i>Canis lupus familiaris</i> | dog | Number of genes | 54 | 6 | 6 | 16 | 5 | 122 | 9 | 0 | 0 | 218 |
| | | Number of alleles | 54 | 6 | 6 | 23 | 5 | 122 | 9 | 0 | 0 | 225 |

| | | | | | | | | | | | | |
|---------------------------------|-------------------|-------------------|-----|----|----|-----|----|----|----|---|---|-----|
| <i>Tursiops truncatus</i> | dolphin | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Mustela putorius furo</i> | ferret | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Capra hircus</i> | goat | Number of genes | 0 | 0 | 0 | 12 | 4 | 35 | 2 | 0 | 0 | 53 |
| | | Number of alleles | 0 | 0 | 0 | 12 | 4 | 35 | 2 | 0 | 0 | 53 |
| <i>Equus caballus</i> | horse | Number of genes | 45 | 40 | 9 | 26 | 5 | 0 | 0 | 0 | 0 | 125 |
| | | Number of alleles | 55 | 40 | 9 | 32 | 7 | 0 | 0 | 0 | 0 | 143 |
| <i>Homo sapiens</i> | human | Number of genes | 106 | 37 | 6 | 72 | 5 | 45 | 7 | 0 | 0 | 278 |
| | | Number of alleles | 402 | 44 | 13 | 108 | 9 | 97 | 10 | 0 | 0 | 683 |
| <i>Mus musculus</i> | mouse | Number of genes | 271 | 31 | 4 | 128 | 5 | 12 | 7 | 0 | 0 | 458 |
| | | Number of alleles | 406 | 38 | 9 | 152 | 10 | 19 | 7 | 0 | 0 | 641 |
| | nonhuman-primates | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Sus scrofa</i> | pig | Number of genes | 15 | 4 | 5 | 15 | 5 | 16 | 3 | 0 | 0 | 63 |
| | | Number of alleles | 17 | 5 | 6 | 25 | 9 | 22 | 4 | 0 | 0 | 88 |
| <i>Ornithorhynchus anatinus</i> | platypus | Number of genes | 45 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| | | Number of alleles | 45 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| <i>Oryctolagus cuniculus</i> | rabbit | Number of genes | 49 | 11 | 6 | 66 | 8 | 31 | 4 | 0 | 0 | 175 |
| | | Number of alleles | 49 | 11 | 11 | 68 | 19 | 31 | 4 | 0 | 0 | 193 |
| <i>Rattus norvegicus</i> | rat | Number of genes | 232 | 35 | 4 | 163 | 7 | 8 | 4 | 0 | 0 | 453 |
| | | Number of alleles | 232 | 37 | 4 | 163 | 7 | 8 | 4 | 0 | 0 | 455 |
| <i>Salmo salar</i> | salmon | Number of genes | 136 | 28 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 185 |
| | | Number of alleles | 150 | 28 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 201 |

| | | | | | | | | | | | | | |
|-------------------------------|---------------------|-------------------|-----|----|-----|---|----|----|---|---|----|----|------|
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Gallus gallus</i> | chicken | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | chondrichthyes | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Gadus morhua</i> | cod | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Macaca fascicularis</i> | crab-eating-macaque | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Canis lupus familiaris</i> | dog | Number of genes | 40 | 53 | 28 | 2 | 12 | 4 | 2 | 4 | 9 | 16 | 170 |
| | | Number of alleles | 40 | 53 | 28 | 2 | 12 | 4 | 2 | 4 | 9 | 16 | 170 |
| <i>Tursiops truncatus</i> | dolphin | Number of genes | 14 | 60 | 0 | 0 | 0 | 6 | 2 | 4 | 2 | 3 | 91 |
| | | Number of alleles | 19 | 60 | 0 | 0 | 0 | 6 | 2 | 4 | 3 | 4 | 98 |
| <i>Mustela putorius furo</i> | ferret | Number of genes | 0 | 0 | 26 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 40 |
| | | Number of alleles | 0 | 0 | 26 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 40 |
| <i>Capra hircus</i> | goat | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Equus caballus</i> | horse | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Homo sapiens</i> | human | Number of genes | 47 | 61 | 66 | 2 | 14 | 8 | 3 | 4 | 11 | 5 | 216* |
| | | Number of alleles | 113 | 71 | 147 | 3 | 16 | 21 | 3 | 4 | 19 | 6 | 388* |
| <i>Mus musculus</i> | mouse | Number of genes | 118 | 55 | 26 | 2 | 14 | 15 | 2 | 2 | 7 | 4 | 235* |
| | | Number of alleles | 256 | 66 | 52 | 2 | 19 | 48 | 2 | 3 | 28 | 4 | 441* |
| | nonhuman-primates | Number of genes | 9 | 17 | 84 | 2 | 23 | 1 | 1 | 2 | 2 | 3 | 144 |

| | | | | | | | | | | | | | |
|---------------------------------|-----------|-------------------|-----|-----|----|---|----|----|----|---|----|---|------|
| | | Number of alleles | 16 | 19 | 86 | 2 | 27 | 1 | 1 | 2 | 3 | 3 | 160 |
| <i>Sus scrofa</i> | pig | Number of genes | 0 | 0 | 30 | 3 | 18 | 0 | 0 | 0 | 0 | 0 | 51 |
| | | Number of alleles | 0 | 0 | 30 | 3 | 18 | 0 | 0 | 0 | 0 | 0 | 51 |
| <i>Ornithorhynchus anatinus</i> | platypus | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Oryctolagus cuniculus</i> | rabbit | Number of genes | 56 | 57 | 63 | 2 | 12 | 3 | 2 | 3 | 10 | 2 | 210 |
| | | Number of alleles | 56 | 57 | 65 | 2 | 13 | 3 | 2 | 3 | 24 | 2 | 227 |
| <i>Rattus norvegicus</i> | rat | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Salmo salar</i> | salmon | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Ovis aries</i> | sheep | Number of genes | 175 | 69 | 72 | 3 | 19 | 65 | 9 | 4 | 0 | 0 | 416 |
| | | Number of alleles | 213 | 76 | 72 | 5 | 22 | 90 | 10 | 4 | 0 | 0 | 492 |
| | teleostei | Number of genes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Number of alleles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Oncorhynchus mykiss</i> | trout | Number of genes | 0 | 0 | 45 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 56 |
| | | Number of alleles | 0 | 0 | 45 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 56 |
| <i>Danio rerio</i> | zebrafish | Number of genes | 150 | 123 | 0 | 0 | 0 | 3 | 6 | 2 | 0 | 0 | 281* |
| | | Number of alleles | 280 | 136 | 0 | 0 | 0 | 6 | 6 | 2 | 0 | 0 | 424* |

* TRAV/DV genes and alleles present in both TRAV and in TRDV reference directories are counted only once in total number of TR genes and alleles.