

**IMGT/V-QUEST reference directory release 202248-3 (30 November 2022)**

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 nancymaeae</i>	Mas-night-monkey	0	0	65	79	65	79
<i>Macaca mulatta</i>	Rhesus-monkey	372	530	227	327	599	857
<i>Vicugna pacos</i>	alpaca	99	99	0	0	99	99
<i>Bos taurus</i>	bovine	114	145	394	505	508	650
<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	82	82	217	217
<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>Gorilla gorilla gorilla</i>	gorilla	145	177	16	20	161	197
<i>Equus caballus</i>	horse	130	151	0	0	130	151
<i>Homo sapiens</i>	human	283	742	216*	388*	499	1130
<i>Lemur catta</i>	lemur	94	108	0	0	94	108
<i>Mus musculus</i>	mouse	473	658	235*	488*	708	1146
<i>Heterocephalus glaber</i>	naked-mole-rat	0	0	178	191	178	191
	nonhuman-primates	0	0	145	162	145	162
<i>Sus scrofa</i>	pig	63	88	51	51	114	139
<i>Ornithorhynchus anatinus</i>	platypus	59	59	0	0	59	59
	pongo	54	54	0	0	54	54
<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	167	265	56	56	223	321
<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

[illegible]

		Number of alleles	0	0	0	0	0	0	0	0	0	0
<i>Macaca mulatta</i>	Rhesus-monkey	Number of genes	111	45	7	112	5	84	8	0	0	372
		Number of alleles	158	49	10	171	5	128	9	0	0	530
<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>Gorilla gorilla gorilla</i>	gorilla	Number of genes	72	32	6	30	5	0	0	0	0	145
		Number of alleles	89	35	10	37	6	0	0	0	0	177
<i>Equus caballus</i>	horse	Number of genes	46	44	9	26	5	0	0	0	0	130
		Number of alleles	57	46	9	32	7	0	0	0	0	151
<i>Homo sapiens</i>	human	Number of genes	111	37	6	72	5	45	7	0	0	283
		Number of alleles	423	47	13	126	9	114	10	0	0	742
<i>Lemur catta</i>	lemur	Number of genes	62	7	7	13	5	0	0	0	0	94
		Number of alleles	62	7	7	25	7	0	0	0	0	108
<i>Mus musculus</i>	mouse	Number of genes	271	34	4	140	5	12	7	0	0	473
		Number of alleles	406	41	9	166	10	19	7	0	0	658
<i>Heterocephalus glaber</i>	naked-mole-rat	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
	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
	pongo	Number of genes	0	0	0	49	5	0	0	0	0	54
		Number of alleles	0	0	0	49	5	0	0	0	0	54
<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
<i>Ovis aries</i>	sheep	Number of genes	10	4	6	12	4	69	2	0	0	107
		Number of alleles	10	4	6	12	4	87	2	0	0	125
	teleostei	Number of genes	410	0	0	0	0	0	0	175	0	585

		Number of alleles	470	0	0	0	0	0	0	0	182	0	652
<i>Oncorhynchus mykiss</i>	trout	Number of genes	109	37	21	0	0	0	0	0	0	0	167
		Number of alleles	166	60	39	0	0	0	0	0	0	0	265
<i>Danio rerio</i>	zebrafish	Number of genes	41	7	7	0	0	0	0	0	11	8	74
		Number of alleles	41	7	7	0	0	0	0	0	11	8	74

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

		Locus	TRA		TRB			TRD			TRG		Total
Latin name	Species or taxon	IMGT group	TRAV	TRAJ	TRBV	TRBD	TRBJ	TRDV	TRDD	TRDJ	TRGV	TRGJ	
<i>Aotus nancymaae</i>	Mas-night-monkey	Number of genes	9	17	20	0	10	1	1	2	2	3	65
		Number of alleles	16	19	22	0	12	1	1	2	3	3	79
<i>Macaca mulatta</i>	Rhesus-monkey	Number of genes	57	60	67	2	14	5	4	4	9	5	227
		Number of alleles	75	76	124	2	19	8	4	5	9	5	327
<i>Vicugna pacos</i>	alpaca	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>Bos taurus</i>	bovine	Number of genes	135	60	85	3	19	53	9	4	17	9	394
		Number of alleles	187	70	86	3	22	70	9	4	38	16	505
<i>Camelus dromedarius</i>	camel	Number of genes	3	0	27	1	13	7	0	0	2	3	56
		Number of alleles	3	0	27	1	13	10	0	0	2	3	59
<i>Felis catus</i>	cat	Number of genes	48	63	25	2	10	7	2	4	7	10	178
		Number of alleles	48	63	25	2	10	7	2	4	7	10	178
<i>Ictalurus punctatus</i>	catfish	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>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	66	2	14	0	0	0	0	0	82

[illegible]

<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*

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