

# IMGT/V-QUEST reference directory release 202349-3 (6 December 2023)

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	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	117	117	40	40	157	157
<i>Capra hircus</i>	goat	53	53	0	0	53	53
<i>Gorilla gorilla gorilla</i>	gorilla	209	356	206	299	415	655
<i>Equus caballus</i>	horse	130	151	0	0	130	151
<i>Homo sapiens</i>	human	283	762	216*	388*	499	1150
<i>Lemur catta</i>	lemur	247	261	0	0	247	261
<i>Mus musculus C57BL/6J</i>	mouse strain C57BL/6J	0	0	227*	227*	227	227
<i>Mus musculus</i>	mouse	474	660	235*	488*	709	1148
<i>Heterocephalus glaber</i>	naked mole-rat	0	0	180	196	180	196
	nonhuman-primate	0	0	145	162	145	162
<i>Sus scrofa</i>	pig	63	89	51	51	114	140
<i>Ornithorhynchus anatinus</i>	platypus	59	59	0	0	59	59
<i>Pongo abelii</i>	Sumatran orangutan	212	212	0	0	212	212
<i>Pongo pygmaeus</i>	Bornean orangutan	229	229	0	0	229	229
<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

		Locus	IGH			IGK		IGL		IGI		Total
Latin name	Species or taxon	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	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

[illegible]

		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	23	4	0	0	89
<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>Pongo abelii</i>	Sumatran orangutan	Number of genes	72	31	8	46	5	43	7	0	0	212
		Number of alleles	72	31	8	46	5	43	7	0	0	212
<i>Pongo pygmaeus</i>	Bornean orangutan	Number of genes	87	31	7	47	5	45	7	0	0	229
		Number of alleles	87	31	7	47	5	45	7	0	0	229
<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	182	0	652
<i>Oncorhynchus mykiss</i>	trout	Number of genes	109	37	21	0	0	0	0	0	0	167
		Number of alleles	166	60	39	0	0	0	0	0	0	265
<i>Danio rerio</i>	zebrafish	Number of genes	41	7	7	0	0	0	0	11	8	74
		Number of alleles	41	7	7	0	0	0	0	11	8	74

		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 nancymaeae</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
		Number of alleles	0	0	66	2	14	0	0	0	0	0	82
<i>Canis lupus familiaris</i>	dog	Number of genes	41	53	28	2	12	3	2	4	9	16	170

		Number of alleles	41	53	28	2	12	3	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>Gorilla gorilla gorilla</i>	gorilla	Number of genes	48	61	55	2	14	3	3	4	11	5	206
		Number of alleles	84	79	80	2	17	5	3	4	19	6	299
<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>Lemur catta</i>	lemur	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>Mus musculus C57BL/6J</i>	mouse strain C57BL/6J	Number of genes	112	55	24	2	14	15	2	2	7	4	227*
		Number of alleles	112	55	24	2	14	15	2	2	7	4	227*
<i>Mus musculus</i>	mouse	Number of genes	118	55	26	2	14	15	2	2	7	4	235*
		Number of alleles	296	70	52	2	19	53	3	3	28	4	488*
<i>Heterocephalus glaber</i>	naked mole-rat	Number of genes	59	55	23	2	13	8	3	3	6	8	180
		Number of alleles	69	55	26	2	13	8	3	3	7	10	196
	nonhuman-primate	Number of genes	9	17	85	2	23	1	1	2	2	3	145
		Number of alleles	16	19	88	2	27	1	1	2	3	3	162
<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>Pongo abelii</i>	Sumatran orangutan	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>Pongo pygmaeus</i>	Bornean orangutan	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*

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