

IMGT/V-QUEST reference directory release 202141-1 (11 October 2021)

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 nancymae</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	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	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>Equus caballus</i>	horse	130	151	0	0	130	151

<i>Homo sapiens</i>	human	283	706	216*	388*	499	1094
<i>Mus musculus</i>	mouse	473	658	235*	446*	708	1104
<i>Heterocephalus glaber</i>	naked-mole-rat	0	0	51	56	51	56
	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
<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 nancymae</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
		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	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	412	44	13	114	9	104	10	0	0	706
<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
<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	81	32	19	0	0	0	0	0	0	132
		Number of alleles	85	34	21	0	0	0	0	0	0	140
<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

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 nancymae</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	0	0	0	53	9	4	17	9	287
		Number of alleles	187	70	0	0	0	70	9	4	38	16	394
<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>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	261	66	52	2	19	48	2	3	28	4	446*
<i>Heterocephalus glaber</i>	naked-mole-rat	Number of genes	0	0	23	2	12	0	0	0	6	8	51

		Number of alleles	0	0	26	2	12	0	0	0	7	9	56
	nonhuman-primates	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>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.