

Additional file 2

Complete list of proteins detected in lumbar and ventricular CSF samples from iNPH patients quantified with mass spectrometry and divided into 'higher lumbar', 'higher ventricular', 'similar' and 'unclear'.

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Higher lumbar	FGB	P02675	16.4 (0.9) [43]	15.3 (0.8) [43]	<0.0001	<0.0001
Higher lumbar	FGG	P02679	15.8 (0.8) [43]	14.7 (0.8) [43]	<0.0001	<0.0001
Higher lumbar	SERPINA5	P05154	15 (0.4) [43]	13.4 (0.9) [43]	<0.0001	<0.0001
Higher lumbar	LIAS	A0A1W2PNQ5	15.6 (0.8) [41]	14.4 (0.8) [31]	<0.0001	<0.0001
Higher ventricular	ACTB	P60709	14.5 (1) [43]	15.5 (0.8) [43]	<0.0001	0.0007
Higher ventricular	ACTBL2	Q562R1	16.3 (1.1) [43]	17.3 (0.9) [43]	<0.0001	0.0043
Higher ventricular	ECRG4	B8ZZE5	15 (0.7) [43]	16.1 (1) [43]	<0.0001	<0.0001
Higher ventricular	F5	A0A0A0MRJ7	14.4 (0.4) [43]	15.4 (0.6) [43]	<0.0001	<0.0001
Higher ventricular	IGFBP7	Q16270	16 (0.4) [43]	17.3 (0.7) [43]	<0.0001	<0.0001
Higher ventricular	PPIA	P62937	14 (0.9) [43]	15.3 (0.8) [43]	<0.0001	<0.0001
Higher ventricular	SPARC	P09486	15.3 (0.5) [43]	16.7 (0.7) [43]	<0.0001	<0.0001
Higher ventricular	SPP1	P10451-5	16.8 (0.9) [42]	17.8 (0.7) [43]	<0.0001	<0.0001
Higher ventricular	YWHAZ	P63104	13.1 (0.9) [41]	14.2 (0.8) [43]	<0.0001	<0.0001
Higher ventricular	S100B	P04271	12.6 (0.6) [39]	15.5 (1.4) [42]	<0.0001	<0.0001
Higher ventricular		E9PNW4	14.2 (1.4) [37]	15.2 (0.9) [43]	<0.0001	0.0049
Higher ventricular	SIAE	Q9HAT2	13.9 (0.6) [37]	14.9 (0.7) [41]	<0.0001	<0.0001
Higher ventricular	CBR1	P16152	13.1 (0.6) [34]	14.3 (1) [42]	<0.0001	<0.0001
Higher ventricular	CFL1	E9PK25	12.9 (0.8) [33]	13.9 (0.8) [41]	<0.0001	0.0023
Higher ventricular	ENO2	P09104	13.6 (0.9) [29]	14.8 (0.8) [43]	<0.0001	0.0004
Higher ventricular	GAPDH	P04406	13.9 (0.7) [29]	14.9 (0.9) [43]	<0.0001	0.0002
Higher ventricular	YWHAE	P62258	12.4 (1.2) [26]	13.8 (1) [43]	<0.0001	0.0017

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Higher ventricular	LTF	E7EQB2	13.7 (1.2) [31]	15.3 (1.3) [37]	<0.0001	0.0009
Higher ventricular	ENO1	P06733	13.8 (1.3) [24]	15.2 (0.9) [42]	<0.0001	0.0177
Higher ventricular	PKM	P14618-2	13.9 (1) [29]	15.1 (1) [37]	<0.0001	0.0102
Higher ventricular	NDRG2	Q9UN36-2	12.9 (1.1) [19]	13.9 (0.8) [38]	<0.0001	0.012
Higher ventricular	QDPR	P09417	13.8 (1) [14]	14.8 (0.9) [40]	0.0001	0.041
Similar	AGT	P01019	17 (0.3) [43]	17 (0.4) [43]	0.0538	1
Similar	APOH	P02749	15.6 (0.4) [43]	15.5 (0.3) [43]	0.2066	1
Similar	C1QC	P02747	16.8 (0.4) [43]	16.8 (0.3) [43]	0.3033	1
Similar	C1R	B4DPQ0	15.5 (0.3) [43]	15.6 (0.3) [43]	0.2429	1
Similar	C1S	P09871	16.2 (0.2) [43]	16.2 (0.3) [43]	0.5856	1
Similar	C4A	A0A0G2JPRO	15.4 (0.8) [43]	15.5 (0.7) [43]	0.3446	1
Similar	C4B	P0C0L5	16.7 (0.3) [43]	16.7 (0.3) [43]	0.9364	1
Similar	C8A	P07357	15.3 (0.5) [43]	15.2 (0.5) [43]	0.085	1
Similar	CD14	P08571	16.5 (0.4) [43]	16.4 (0.4) [43]	0.2281	1
Similar	CFHR1	B1AKG0	14.9 (0.6) [43]	14.8 (0.7) [43]	0.5021	1
Similar	CLEC3B	E9PHK0	16.9 (0.5) [43]	16.9 (0.3) [43]	0.4987	1
Similar	CLU	P10909	17.3 (0.3) [43]	17.3 (0.3) [43]	0.3623	1
Similar	COL18A1	P39060	15.2 (0.4) [43]	15.2 (0.3) [43]	0.5888	1
Similar	COL6A3	P12111	13.9 (0.4) [43]	13.7 (0.5) [43]	0.0555	1
Similar	ECM1	Q16610	14.8 (0.3) [43]	14.9 (0.4) [43]	0.5068	1
Similar	F2	P00734	16 (0.5) [43]	15.9 (0.3) [43]	0.4207	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	FN1	P02751	15.9 (0.3) [43]	15.9 (0.3) [43]	0.5461	1
Similar	FSTL1	Q12841	13.4 (0.9) [43]	13.6 (0.6) [43]	0.2688	1
Similar	HP	P00738	17.4 (1.2) [43]	17.1 (1.1) [43]	0.1022	1
Similar	HPR	P00739	14.7 (1) [43]	14.5 (1) [43]	0.1184	1
Similar	HPX	P02790	18.2 (0.5) [43]	18.1 (0.3) [43]	0.2598	1
Similar	IGFBP2	P18065	14.1 (0.5) [43]	14.1 (0.6) [43]	0.6867	1
Similar	IGKV3-15	P01624	17.5 (0.5) [43]	17.4 (0.6) [43]	0.3142	1
Similar	IGLV1-47	P01700	16.3 (0.8) [43]	16 (0.6) [43]	0.0664	1
Similar	LYVE1	Q9Y5Y7	14.6 (0.7) [43]	14.5 (0.5) [43]	0.5848	1
Similar	LYZ	A0A0B4J259	16.8 (0.6) [43]	16.8 (0.5) [43]	0.6071	1
Similar	MGP	P08493	15.6 (0.4) [43]	15.5 (0.5) [43]	0.1192	1
Similar	PI16	Q6UXB8	13.8 (0.6) [43]	13.7 (0.6) [43]	0.3942	1
Similar	PLTP	P55058	16 (0.3) [43]	16 (0.3) [43]	0.5546	1
Similar	PROCR	Q9UNN8	14.2 (0.8) [43]	14.3 (0.8) [43]	0.2086	1
Similar	RBP4	P02753	16.3 (0.3) [43]	16.4 (0.4) [43]	0.2881	1
Similar	RNASE1	P07998	12.4 (0.8) [43]	12.4 (0.6) [43]	0.7251	1
Similar	SCRG1	O75711	16.9 (0.4) [43]	17.1 (0.7) [43]	0.059	1
Similar	SELL	P14151	15.2 (0.4) [43]	15.1 (0.5) [43]	0.057	1
Similar	TAGLN	Q01995	14.1 (0.6) [43]	14 (0.7) [43]	0.4089	1
Similar	TF	P02787	17.9 (0.3) [43]	17.9 (0.2) [43]	0.7373	1
Similar	TGFBI	Q15582	14.5 (0.6) [43]	14.4 (0.3) [43]	0.3039	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	APOB	P04114	13.5 (1.2) [42]	13.7 (1.1) [43]	0.4252	1
Similar	C3	M0R1Q1	17.2 (0.6) [42]	17.1 (0.6) [43]	0.5144	1
Similar	CADM3	Q8N126	15.7 (0.7) [42]	15.7 (0.5) [43]	0.8128	1
Similar	CHI3L2	Q15782	13.2 (0.8) [43]	13.1 (0.7) [42]	0.6943	1
Similar	FCGBP	Q9Y6R7	14.3 (0.8) [42]	14.3 (0.6) [43]	0.5064	1
Similar	FETUB	Q9UGM5	14.2 (0.9) [42]	14 (0.6) [43]	0.1134	1
Similar	LCAT	P04180	15 (0.7) [43]	15 (0.6) [42]	0.853	1
Similar	VSIG4	Q9Y279	13.1 (1.1) [42]	13.1 (0.5) [43]	0.9567	1
Similar	C16orf89	A0A0A0MT71	14.5 (0.5) [41]	14.6 (0.4) [43]	0.1869	1
Similar	DCN	P07585	14 (0.8) [42]	14.1 (0.8) [42]	0.7366	1
Similar	ECM2	O94769	14.8 (0.6) [41]	14.7 (0.6) [43]	0.3613	1
Similar	IGHV1OR15-1	A0A075B7D0	17 (1.3) [42]	16.9 (1.2) [42]	0.2885	1
Similar	MAN1A1	P33908	14.1 (0.4) [42]	14.2 (0.3) [42]	0.0772	1
Similar	AEBP1	Q8IUX7	13.9 (0.5) [40]	13.8 (0.5) [43]	0.2336	1
Similar	CD99	P14209	16.2 (0.5) [40]	16.4 (0.7) [43]	0.1103	1
Similar	CLSTN3	Q9BQT9	12.7 (2) [40]	12.7 (1.8) [43]	0.4641	1
Similar	CNTNAP4	A0A087WTA1	14.3 (0.7) [40]	14.1 (0.7) [43]	0.1463	1
Similar	FBLN5	G3V4U0	15.3 (0.8) [40]	15.1 (0.7) [43]	0.2339	1
Similar	IDS	P22304	14.7 (0.7) [40]	14.7 (0.6) [43]	0.7741	1
Similar	ITIH5	C9J2H1	13.8 (0.4) [40]	13.8 (0.3) [43]	0.5623	1
Similar	MFAP4	K7ES70	14.4 (0.5) [40]	14.5 (0.6) [43]	0.2408	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	NRXN2	G5E9G7	15 (0.6) [40]	15 (0.6) [43]	0.3998	1
Similar	QPCT	Q16769	13.8 (0.6) [40]	14 (0.6) [43]	0.1671	1
Similar	SELENOP	A0A182DWH7	15.5 (0.7) [41]	15.5 (0.6) [42]	0.8339	1
Similar	SLITRK4	Q8IW52	13.4 (0.5) [40]	13.5 (0.5) [43]	0.225	1
Similar	TCN2	B5MBX2	15.3 (1.3) [41]	15.5 (1.3) [42]	0.4625	1
Similar	TIMP1	P01033	16.8 (1.2) [43]	16.6 (0.4) [40]	0.1759	1
Similar	TREM2	Q9NZC2	14 (0.9) [43]	13.8 (0.9) [40]	0.1183	1
Similar	PPIC	P45877	14.6 (0.4) [41]	14.8 (0.4) [41]	0.23	1
Similar	ADAM22	F8WAD8	12.3 (1.4) [38]	12.7 (1.9) [43]	0.2906	1
Similar	IGKV1-17	P01599	15.4 (0.7) [41]	15.3 (0.7) [40]	0.174	1
Similar	MYH11	P35749	15.7 (1.6) [39]	15.8 (1) [42]	0.921	1
Similar	NPY	P01303	14 (1.2) [38]	14.4 (1.2) [43]	0.2607	1
Similar	ROBO1	Q9Y6N7	14.1 (0.4) [39]	14.1 (0.5) [42]	0.6441	1
Similar	CDH4	P55283	13.2 (0.5) [37]	13.3 (0.7) [43]	0.1162	1
Similar	IGHV3-64D	A0A0J9YX35	15.9 (0.6) [38]	15.8 (0.7) [42]	0.95	1
Similar	VSTM2B	A6NLU5	13.9 (0.9) [38]	14.1 (1) [42]	0.2159	1
Similar	DNER	Q8NFT8	12.1 (0.4) [39]	12.1 (0.5) [40]	0.2416	1
Similar	NID2	Q14112	14.1 (0.5) [39]	13.9 (0.5) [40]	0.2568	1
Similar	NRP1	E7EX60	13 (0.5) [37]	12.9 (0.5) [42]	0.4418	1
Similar	ADGRL1	O94910	13.9 (0.7) [36]	13.9 (0.6) [42]	0.9002	1
Similar	AGA	P20933	13.9 (1.6) [35]	14 (1.8) [43]	0.8066	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	GANAB	Q14697	12.5 (0.6) [37]	12.7 (0.6) [41]	0.1182	1
Similar	IGKV3-7	A0A075B6H7	18.6 (1.2) [38]	18.4 (1.1) [40]	0.5379	1
Similar	LY6H	O94772	11.7 (0.8) [38]	11.8 (0.9) [40]	0.6356	1
Similar	PTPRN2	Q92932	15.4 (0.8) [35]	15.5 (0.6) [43]	0.8483	1
Similar	RELN	J3KQ66	14.6 (0.5) [39]	14.7 (0.6) [39]	0.253	1
Similar	HSPA5	P11021	14.1 (0.7) [34]	14.3 (0.2) [43]	0.0888	1
Similar	BGN	P21810	13.2 (0.8) [35]	13.6 (1) [41]	0.0798	1
Similar	IGLV3-19	P01714	14.5 (0.6) [41]	14.2 (0.8) [35]	0.0583	1
Similar	ITIH3	Q06033	13.6 (0.9) [42]	13.5 (0.8) [34]	0.2399	1
Similar	MGAT1	P26572	14 (0.5) [38]	14.2 (0.9) [38]	0.2206	1
Similar	VIM	P08670	13.2 (1.4) [42]	12.8 (1.2) [34]	0.2226	1
Similar	L1CAM	P32004	12.6 (0.6) [33]	12.6 (0.7) [42]	0.1582	1
Similar	SLC3A2	F5GZS6	13.1 (0.6) [35]	13 (0.4) [40]	0.3919	1
Similar	EFCAB14	O75071	13.9 (0.4) [37]	14 (0.6) [37]	0.0797	1
Similar	LTBP2	G3V3X5	12.6 (0.7) [34]	12.5 (0.6) [40]	0.2346	1
Similar	OLFM1	Q99784	14.1 (0.4) [33]	14.1 (0.4) [41]	0.474	1
Similar	TIMP2	P16035	15.8 (0.3) [31]	15.9 (0.4) [42]	0.6728	1
Similar	COL15A1	A0A087X0K0	13.8 (0.6) [41]	13.9 (0.5) [31]	0.4347	1
Similar	CTSB	P07858	13.5 (1.1) [31]	13.7 (0.6) [41]	0.2765	1
Similar		A0A0G2JRQ6	16 (0.8) [35]	15.6 (0.7) [37]	0.2591	1
Similar	B3GALNT1	O75752	13.3 (0.7) [30]	13.4 (0.6) [41]	0.616	1

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Similar	LBP	P18428	13.5 (0.7) [35]	13.5 (0.5) [36]	0.6888	1
Similar	MRC1	P22897	13.8 (1.3) [35]	13.6 (0.7) [36]	0.5479	1
Similar	CLEC11A	Q9Y240	13.3 (0.5) [36]	13.2 (0.7) [34]	0.4072	1
Similar	TWSG1	J3QS03	14.6 (0.3) [32]	14.6 (0.2) [38]	0.0578	1
Similar	C8G	P07360	14.2 (0.9) [31]	14.3 (0.7) [38]	0.7059	1
Similar	FBLN7	Q53RD9	12.5 (0.5) [31]	12.6 (0.4) [38]	0.0994	1
Similar	LAMP1	P11279	12.9 (0.4) [31]	13 (0.5) [38]	0.0908	1
Similar	KRT2	P35908	14.3 (1.6) [31]	14.7 (1.7) [37]	0.1795	1
Similar	PCDHAC2	Q9Y5I4	13.2 (1.1) [33]	13.4 (0.9) [35]	0.5925	1
Similar	LAMA2	A0A087WX80	11.2 (1.3) [37]	11 (1.3) [30]	0.2779	1
Similar	PDGFB	A9UJN9	13.7 (0.8) [34]	14.2 (0.8) [33]	0.2599	1
Similar	SEMA3G	Q9NS98	12.9 (0.7) [35]	13.1 (0.6) [32]	0.3457	1
Similar	ADAMTS4	O75173	14.4 (0.3) [27]	14.6 (0.4) [39]	0.0548	1
Similar	B2M	H0YLF3	12.8 (0.4) [30]	13.1 (0.4) [36]	0.0686	1
Similar	HSP90B1	P14625	13.7 (0.9) [29]	13.8 (0.4) [37]	0.3671	1
Similar	PAPLN	O95428	13.2 (0.4) [38]	13.3 (0.4) [28]	0.8118	1
Similar	SLITRK1	Q96PX8	13.4 (0.5) [33]	13.4 (0.6) [33]	0.771	1
Similar	EFNA1	P20827	13.3 (0.9) [28]	13.5 (1.2) [37]	0.8261	1
Similar	SDF4	Q9BRK5	13.1 (1.1) [28]	13.5 (0.8) [37]	0.1011	1
Similar	CASP14	P31944	14.2 (1.1) [39]	14.1 (1) [25]	0.3461	1
Similar	GDA	Q9Y2T3	13.4 (0.7) [21]	13.7 (0.7) [43]	0.1542	1

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Similar	LAMC1	P11047	14.6 (2.3) [32]	14.1 (1.1) [32]	0.2049	1
Similar	CALY	Q9NYX4	13.8 (0.8) [22]	13.6 (0.7) [41]	0.2571	1
Similar	MASP1	P48740-2	13.1 (0.7) [26]	13.5 (1) [37]	0.2572	1
Similar	PLD4	F5H2B5	13.5 (0.5) [27]	13.7 (0.6) [36]	0.0567	1
Similar	SPOCK2	Q92563	14 (0.5) [23]	13.9 (0.7) [39]	0.8418	1
Similar	TALDO1	P37837	13.6 (1.9) [23]	13.8 (1) [39]	0.4742	1
Similar	ADAMTS1	Q9UHI8	14.5 (0.3) [27]	14.6 (0.3) [34]	0.1312	1
Similar	CCP110	O43303	21.7 (0.7) [29]	21.6 (0.8) [32]	0.7766	1
Similar	CD163	C9JHR8	13.7 (1.1) [29]	13.5 (0.6) [32]	0.6469	1
Similar	RNASE6	Q93091	13.9 (0.6) [23]	13.7 (0.7) [38]	0.1578	1
Similar	GAP43	P17677	11.4 (1.1) [23]	11.6 (0.8) [37]	0.2205	1
Similar	PDIA3	P30101	13.5 (0.9) [23]	13.5 (0.6) [37]	0.5812	1
Similar	PCDH17	O14917	12 (0.5) [27]	11.8 (0.8) [32]	0.2609	1
Similar	B3GNT2	Q9NY97	12.2 (1) [24]	12.3 (1) [34]	0.7739	1
Similar	C1QTNF5	Q9BXJ0	12.7 (0.8) [16]	13.2 (0.7) [42]	0.1176	1
Similar	COL3A1	P02461	13.6 (0.9) [28]	13.2 (0.7) [30]	0.2511	1
Similar	SLC39A10	Q9ULF5	12.6 (0.4) [26]	12.5 (0.6) [32]	0.9907	1
Similar	CHST10	O43529	17.6 (0.5) [24]	18.2 (1.8) [33]	0.4091	1
Similar	DDR1	A0A0A0MSX3	13.8 (1.1) [20]	14 (0.5) [36]	0.2029	1
Similar	KRT10	P13645	13.3 (1.4) [24]	13.9 (1.3) [32]	0.0728	1
Similar	MATN2	O00339	12.9 (0.3) [32]	12.7 (0.5) [24]	0.0937	1

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Similar	PLOD1	Q02809	12.7 (0.4) [21]	12.9 (0.6) [35]	0.751	1
Similar	CA1	P00915	15.5 (2.4) [20]	14.8 (1.3) [35]	0.1499	1
Similar	CTSC	P53634	13.2 (0.6) [30]	13 (0.5) [24]	0.0537	1
Similar	DCC	E7EQM8	13.4 (0.4) [23]	13.4 (0.5) [31]	0.8465	1
Similar	F10	P00742	14.3 (1) [24]	14.2 (0.4) [30]	0.6164	1
Similar	FTL	P02792	13.7 (2.2) [16]	13.2 (0.5) [38]	0.471	1
Similar	LAMB2	P55268	12.3 (0.3) [22]	12.3 (0.5) [32]	0.5633	1
Similar	LGALS1	P09382	14.1 (0.8) [20]	14.5 (0.5) [34]	0.1419	1
Similar	C4BPA	P04003	12.6 (1.5) [28]	12.3 (1.2) [25]	0.3114	1
Similar	FRRS1L	Q9P0K9	10.4 (2.3) [20]	10.5 (2.1) [33]	0.1674	1
Similar	GOLIM4	F8W785	10.9 (1.6) [26]	10.1 (1.5) [27]	0.1602	1
Similar	LCP1	P13796	14 (1) [27]	13.8 (0.5) [26]	0.3594	1
Similar	GPC1	P35052	12.8 (2.2) [20]	12.9 (1.8) [32]	0.8257	1
Similar	HBD	P02042	16.3 (2.5) [16]	16 (0.9) [36]	0.6806	1
Similar	PCDH7	O60245	12.4 (0.4) [23]	12.6 (0.5) [29]	0.1241	1
Similar	RP1	P56715	15.1 (0.6) [27]	14.8 (0.7) [25]	0.0523	1
Similar	IGHV3OR16-12	A0A075B7B8	13.2 (0.5) [28]	13 (0.4) [23]	0.1588	1
Similar	KRT6A	P02538	12.7 (1.1) [21]	13.5 (2) [30]	0.3138	1
Similar	KRT77	Q7Z794	14.9 (1.2) [20]	15.1 (1.7) [31]	0.8446	1
Similar	ANG	P03950	13.8 (0.4) [20]	13.9 (0.6) [30]	0.2679	1
Similar	AXL	P30530	15 (0.6) [17]	15.1 (1) [33]	0.6979	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	IGKV1-37	A0A075B6S9	16.6 (1.2) [27]	15.8 (0.9) [23]	0.0567	1
Similar	KRT9	P35527	14.1 (1.1) [20]	14.2 (1.4) [30]	0.8826	1
Similar	MASP1	P48740	13.4 (0.7) [17]	13.7 (0.9) [33]	0.5679	1
Similar	PPT1	A0A286YFE3	12.3 (0.4) [15]	12.5 (0.5) [35]	0.1027	1
Similar	RTN4R	H7COV4	13.9 (1) [18]	13.6 (0.6) [32]	0.9247	1
Similar	CSPG4	Q6UVK1	11.5 (0.8) [29]	11.4 (0.8) [20]	0.9147	1
Similar	NOMO1	A0A087X117	13.2 (2.4) [24]	14.1 (2) [25]	0.9261	1
Similar	NTRK2	Q16620	15.1 (0.5) [15]	15.2 (0.5) [34]	0.1315	1
Similar	OLFML3	B4DNG0	12.5 (1) [25]	12.6 (0.8) [24]	0.1166	1
Similar	SELENOM	A0A087WWF1	12.9 (0.6) [23]	13.2 (0.6) [26]	0.3201	1
Similar	ST6GALNAC1	Q9NSC7	13 (0.5) [26]	13.1 (0.5) [23]	0.736	1
Similar	MINPP1	Q9UNW1	14.6 (1.3) [24]	14.4 (1.3) [24]	0.8981	1
Similar	OPCML	Q14982	14.5 (0.8) [21]	14.4 (1.1) [27]	0.8492	1
Similar	SLITRK5	O94991	12.4 (1.4) [23]	13.2 (1.2) [25]	0.1411	1
Similar	THBS2	P35442	13.8 (0.5) [21]	13.9 (0.5) [27]	0.801	1
Similar	CD109	Q6YHK3	12.2 (1.4) [16]	12.1 (0.7) [31]	0.8543	1
Similar	FCGR2A	P12318	14.2 (0.3) [19]	14.3 (0.4) [28]	0.6389	1
Similar	GLOD4	F6TLX2	15.7 (1.1) [20]	15.3 (1.4) [27]	0.3396	1
Similar	HSPA13	P48723	12.9 (0.5) [19]	13 (0.9) [28]	0.7618	1
Similar	SERPINA10	G3V2W1	11.7 (0.8) [30]	11.7 (1.1) [17]	0.3202	1
Similar	CSTB	P04080	14.2 (1.3) [14]	14.2 (0.6) [32]	0.947	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	IGHD	A0A0A0MS09	14.5 (0.9) [23]	14.2 (1.1) [23]	0.0916	1
Similar	NCAM1	H7BYX6	12.1 (1.3) [19]	11.9 (1.2) [27]	0.4727	1
Similar	PFN1	P07737	15.3 (1.1) [14]	15.2 (0.7) [32]	0.9991	1
Similar	QSOX2	Q6ZRP7	10.8 (0.7) [23]	10.7 (0.7) [23]	0.2824	1
Similar	TPT1	A0A0B4J2C3	16.9 (0.5) [20]	16.8 (0.5) [26]	0.1601	1
Similar	HS6ST3	Q8IZP7	14.2 (1.4) [17]	13.9 (1.5) [28]	0.5068	1
Similar	IGKV1-16	P04430	14.6 (0.6) [26]	14.3 (0.7) [19]	0.0504	1
Similar	PDGFA	A0A0A0MSC4	15.4 (0.6) [17]	15.6 (0.4) [28]	0.7798	1
Similar	PVALB	B8ZZ19	13.3 (0.6) [20]	13.4 (0.7) [24]	0.1167	1
Similar	COCH	O43405	13.7 (0.4) [12]	13.9 (0.6) [30]	0.1067	1
Similar	CXCL16	Q9H2A7	14.5 (0.2) [15]	14.5 (0.3) [27]	0.6102	1
Similar	GALNS	P34059	13.6 (2.1) [19]	13.3 (2.1) [23]	0.687	1
Similar	CLU	P10909-3	15.7 (0.9) [25]	15.6 (1) [16]	0.8192	1
Similar	COTL1	Q14019	12.5 (0.9) [13]	12.7 (0.6) [28]	0.3936	1
Similar	GAA	P10253	12.8 (0.7) [10]	13.1 (1.3) [31]	0.0906	1
Similar	NPTX2	P47972	13.3 (1) [16]	13.4 (0.8) [25]	0.7576	1
Similar	CELSR2	Q9HCU4	13.9 (1.1) [11]	13.9 (0.6) [29]	0.5178	1
Similar	IGHV2-5	P01817	12.1 (1.2) [23]	12.5 (1.3) [17]	0.3333	1
Similar	IGKV1-39	P01597	19.7 (0.9) [19]	19.9 (0.7) [21]	0.5816	1
Similar	CST6	Q15828	13.3 (0.4) [18]	13.3 (0.5) [21]	0.6519	1
Similar	ADAM11	B4DKD2	13.2 (0.4) [12]	13 (0.4) [26]	0.4644	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Similar	CALB1	P05937	13.2 (0.7) [15]	13.5 (1.2) [23]	0.3585	1
Similar	CCL14	A0A087X089	13.7 (0.4) [16]	13.7 (0.5) [22]	0.3565	1
Similar	MT3	H3BPK2	8.8 (0.6) [16]	10 (2.4) [22]	0.5952	1
Similar	IGHV1-18	A0A0C4DH31	14.3 (0.8) [18]	14.3 (0.5) [19]	0.6146	1
Similar	NSF	I3L0N3	12.9 (0.4) [14]	12.9 (1.1) [23]	0.4842	1
Similar	DSC1	Q08554	14.8 (0.4) [16]	14.8 (0.3) [18]	0.8681	1
Similar	MAN2B2	E9PCD7	13.4 (1.5) [17]	14.2 (1.4) [15]	0.6471	1
Similar	B3GNT9	Q6UX72	7.6 (1) [18]	6.9 (0.8) [13]	0.1501	1
Similar	CDH15	P55291	12.5 (0.9) [12]	12.2 (1.1) [18]	0.7892	1
Similar	IGHV4-28	A0A0C4DH34	9.7 (0.5) [12]	9.4 (0.7) [17]	0.3026	1
Similar	CHIT1	Q13231	13.6 (1.2) [13]	13.3 (0.8) [14]	0.9271	1
Unclear	A1BG	P04217	17.8 (0.4) [43]	17.3 (0.3) [43]	<0.0001	<0.0001
Unclear	A1BG	P04217-2	17.2 (0.3) [43]	16.8 (0.3) [43]	<0.0001	<0.0001
Unclear	A2M	P01023	16.5 (0.3) [43]	16.7 (0.3) [43]	0.0001	0.0926
Unclear	ACSBG2	Q5FVE4	20.9 (0.5) [43]	21.8 (0.7) [43]	<0.0001	<0.0001
Unclear	AFM	P43652	15.4 (0.4) [43]	15.1 (0.4) [43]	<0.0001	0.0001
Unclear	AGRN	O00468-6	13.7 (0.9) [43]	14.2 (0.6) [43]	0.0018	1
Unclear	AHSG	P02765	17.1 (0.6) [43]	16.7 (0.5) [43]	<0.0001	<0.0001
Unclear	ALB	P02768	19.8 (0.3) [43]	19.4 (0.3) [43]	<0.0001	<0.0001
Unclear	ALCAM	Q13740	14.9 (0.5) [43]	15.4 (0.3) [43]	<0.0001	0.0001
Unclear	ALDOA	P04075	14.2 (0.6) [43]	14.9 (0.5) [43]	<0.0001	0.0005

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	ALDOC	P09972	14 (0.7) [43]	14.9 (0.5) [43]	<0.0001	<0.0001
Unclear	AMBP	P02760	15.9 (0.5) [43]	15.6 (0.4) [43]	<0.0001	0.0136
Unclear	APCS	P02743	14.9 (0.7) [43]	14.2 (0.6) [43]	<0.0001	0.0009
Unclear	APLP1	B7Z4G8	16.5 (0.7) [43]	17.1 (0.3) [43]	<0.0001	0.0003
Unclear	APOA1	P02647	18.9 (0.4) [43]	18.1 (0.4) [43]	<0.0001	<0.0001
Unclear	APOA2	P02652	17.8 (0.5) [43]	17.2 (0.6) [43]	<0.0001	<0.0001
Unclear	APOA4	P06727	16.9 (0.6) [43]	16.6 (0.5) [43]	<0.0001	0.003
Unclear	APOC1	K7ERI9	16 (0.8) [43]	15.3 (0.6) [43]	<0.0001	0.0001
Unclear	APOC3	B0YIW2	17.2 (0.8) [43]	16.2 (0.8) [43]	<0.0001	<0.0001
Unclear	APOD	C9JF17	17.7 (0.4) [43]	17 (0.4) [43]	<0.0001	<0.0001
Unclear	APOE	P02649	17.5 (0.5) [43]	17.7 (0.5) [43]	0.0195	1
Unclear	APOM	O95445	15.8 (0.6) [43]	15.3 (0.6) [43]	0.0001	0.0619
Unclear	APP	P05067	14.7 (0.7) [43]	15.2 (0.4) [43]	<0.0001	0.0004
Unclear	ARPC4-TTL3	A0A0A6YYG9	16.7 (0.4) [43]	16.5 (0.4) [43]	0.0002	0.1058
Unclear	ATP6AP1	Q15904	14.7 (0.5) [43]	15 (0.4) [43]	0.0011	0.7316
Unclear	AZGP1	P25311	17.2 (0.3) [43]	16.8 (0.3) [43]	<0.0001	<0.0001
Unclear	B2M	P61769	16.9 (0.3) [43]	17.1 (0.4) [43]	0.0484	1
Unclear	B4GAT1	O43505	16.5 (0.9) [43]	17.1 (0.7) [43]	0.0002	0.1314
Unclear	BCAN	Q96GW7	15.5 (0.6) [43]	16 (0.6) [43]	<0.0001	0.001
Unclear	BTD	P43251	16.1 (0.4) [43]	16.4 (0.3) [43]	<0.0001	0.0301
Unclear	C1QA	P02745	14.6 (0.4) [43]	14.4 (0.5) [43]	0.0113	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	C1QB	D6R934	15.1 (0.5) [43]	15.3 (0.4) [43]	0.0004	0.2879
Unclear	C2	P06681	14.9 (0.4) [43]	14.6 (0.3) [43]	<0.0001	0.0005
Unclear	C3	P01024	17.1 (0.2) [43]	17 (0.2) [43]	<0.0001	0.0033
Unclear	C5	P01031	14.4 (0.5) [43]	13.8 (0.4) [43]	<0.0001	<0.0001
Unclear	C6	P13671	15.1 (0.5) [43]	14.7 (0.3) [43]	<0.0001	0.0007
Unclear	C7	P10643	16.2 (0.4) [43]	16 (0.4) [43]	0.0001	0.0736
Unclear	C8B	F5GY80	14.1 (0.3) [43]	13.8 (0.3) [43]	<0.0001	0.0001
Unclear	C9	P02748	15.6 (0.5) [43]	15.2 (0.4) [43]	<0.0001	0.0001
Unclear	CADM4	Q8NFZ8	15.9 (0.5) [43]	16.4 (0.3) [43]	<0.0001	<0.0001
Unclear	CD44	H0YD13	16.8 (0.6) [43]	17.2 (0.4) [43]	0.0003	0.2039
Unclear	CDH2	P19022	15.8 (0.4) [43]	16.3 (0.3) [43]	<0.0001	<0.0001
Unclear	CFD	K7ERG9	16.6 (0.5) [43]	16.4 (0.5) [43]	0.0002	0.1006
Unclear	CFH	P08603	15.7 (0.2) [43]	15.4 (0.2) [43]	<0.0001	<0.0001
Unclear	CFI	E7ETH0	14.9 (0.3) [43]	14.6 (0.3) [43]	<0.0001	<0.0001
Unclear	CHGA	P10645	16.1 (0.7) [43]	16.7 (0.5) [43]	<0.0001	0.0011
Unclear	CHGB	P05060	15.9 (0.7) [43]	16.3 (0.5) [43]	0.0001	0.0596
Unclear	CHI3L1	P36222	16 (0.5) [43]	16.3 (0.5) [43]	<0.0001	0.0131
Unclear	CHL1	O00533	15.3 (0.7) [43]	15.7 (0.5) [43]	<0.0001	0.0266
Unclear	CLSTN1	O94985	16.2 (0.7) [43]	16.7 (0.4) [43]	<0.0001	0.0004
Unclear	CNDP1	Q96KN2	16.7 (0.6) [43]	17.3 (0.5) [43]	<0.0001	<0.0001
Unclear	CNTN1	Q12860	15.6 (0.7) [43]	16.1 (0.4) [43]	0.0001	0.053

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	COL1A1	P02452	14.6 (0.6) [43]	14.2 (0.5) [43]	0.0001	0.0748
Unclear	COL1A2	A0A087WTA8	14.3 (0.4) [43]	14.1 (0.3) [43]	0.0002	0.1324
Unclear	COL6A1	A0A087X0S5	14.8 (0.5) [43]	15 (0.4) [43]	0.0047	1
Unclear	CP	P00450	16.3 (0.3) [43]	16.1 (0.3) [43]	<0.0001	0.0002
Unclear	CPB2	A0A087WSY5	15.2 (0.4) [43]	15.1 (0.4) [43]	0.0036	1
Unclear	CPE	P16870	16.3 (0.8) [43]	17 (0.5) [43]	<0.0001	0.0003
Unclear	CPQ	Q9Y646	15.4 (0.8) [43]	15.8 (0.5) [43]	0.006	1
Unclear	CSF1R	E9PEK4	15.2 (0.4) [43]	15.5 (0.4) [43]	<0.0001	0.0006
Unclear	CST3	P01034	17.7 (0.4) [43]	18.1 (0.3) [43]	<0.0001	<0.0001
Unclear	CTSD	A0A1B0GV23	16 (0.4) [43]	16.9 (0.6) [43]	<0.0001	<0.0001
Unclear	CTSL	P07711	14.7 (0.4) [43]	15.2 (0.5) [43]	<0.0001	0.0031
Unclear	DAG1	Q14118	15.6 (0.4) [43]	15.8 (0.3) [43]	0.0002	0.1477
Unclear	DBI	A0A0A0MTI5	14.3 (0.4) [43]	15.3 (0.6) [43]	<0.0001	<0.0001
Unclear	DKK3	F6SYF8	16.1 (0.4) [43]	16.5 (0.4) [43]	0.0001	0.0617
Unclear	EFEMP1	A0A0U1RQV3	16.3 (0.4) [43]	16.8 (0.4) [43]	<0.0001	<0.0001
Unclear	ENDOD1	O94919	15.1 (0.4) [43]	15.7 (0.3) [43]	<0.0001	<0.0001
Unclear	ENPP2	E7EUF1	16.5 (0.4) [43]	17.4 (0.6) [43]	<0.0001	<0.0001
Unclear	F12	P00748	16.1 (0.6) [43]	15.6 (0.5) [43]	<0.0001	<0.0001
Unclear	FAM3C	Q92520	15 (0.5) [43]	15.6 (0.4) [43]	<0.0001	<0.0001
Unclear	FBLN1	P23142	16.2 (0.4) [43]	16.6 (0.4) [43]	<0.0001	<0.0001
Unclear	FBLN1	B1AHL2	16.4 (0.4) [43]	17 (0.4) [43]	<0.0001	<0.0001

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	FCGR3A	A0A1W2PQB1	14.2 (1) [43]	14.5 (0.7) [43]	0.0357	1
Unclear	FGA	P02671	14.9 (0.9) [43]	14.1 (0.7) [43]	<0.0001	0.0004
Unclear	GC	P02774	17 (0.3) [43]	16.5 (0.3) [43]	<0.0001	<0.0001
Unclear	GM2A	P17900	15.9 (0.5) [43]	16.4 (0.5) [43]	<0.0001	0.0185
Unclear	GPR37L1	O60883	14.2 (0.5) [43]	14.5 (0.5) [43]	0.0004	0.2598
Unclear	GPX3	A0A087X1J7	15.6 (0.4) [43]	15.9 (0.5) [43]	0.0004	0.2668
Unclear	GSN	P06396	17 (0.3) [43]	16.8 (0.2) [43]	0.0076	1
Unclear	HBA1	P69905	16.3 (2.6) [43]	17.9 (1.7) [43]	0.002	1
Unclear	HBB	P68871	16.1 (2.7) [43]	17.7 (1.8) [43]	0.0033	1
Unclear	HEXB	P07686	14.2 (0.5) [43]	14.8 (0.4) [43]	<0.0001	<0.0001
Unclear	HRG	P04196	16.2 (0.4) [43]	15.7 (0.4) [43]	<0.0001	<0.0001
Unclear	HSPG2	P98160	14.4 (0.3) [43]	14.2 (0.4) [43]	0.0187	1
Unclear	HTRA1	Q92743	14.3 (0.3) [43]	14.6 (0.4) [43]	<0.0001	0.0036
Unclear	ICOSLG	K4DIA0	15.6 (0.7) [43]	16.1 (0.7) [43]	0.0003	0.2155
Unclear	IGFBP6	P24592	18.4 (0.5) [43]	17.8 (0.5) [43]	<0.0001	0.0001
Unclear	IGHA1	A0A286YEY1	17.7 (1) [43]	17 (0.9) [43]	<0.0001	<0.0001
Unclear	IGHA2	A0A286YEY5	17.6 (0.9) [43]	17 (0.8) [43]	<0.0001	0.0001
Unclear	IGHG1	P01857	19.7 (0.5) [43]	19.2 (0.4) [43]	<0.0001	<0.0001
Unclear	IGHG2	P01859	19.8 (0.6) [43]	19.3 (0.5) [43]	<0.0001	<0.0001
Unclear	IGHG3	P01860	16.7 (1) [43]	15.8 (0.8) [43]	<0.0001	0.0006
Unclear	IGHV3-15	A0A0B4J1V0	15.6 (0.6) [43]	15.4 (0.6) [43]	0.0039	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	IGHV3-30	P01768	16.7 (0.5) [43]	16.5 (0.4) [43]	0.0007	0.4466
Unclear	IGHV3-49	A0A0A0MS15	16.5 (0.7) [43]	16.3 (0.6) [43]	0.0106	1
Unclear	IGHV3-7	P01780	17.1 (0.6) [43]	16.8 (0.4) [43]	0.001	0.6603
Unclear	IGHV3-72	A0A0B4J1Y9	16.5 (0.6) [43]	16 (0.5) [43]	<0.0001	0.0084
Unclear	IGHV3OR16-9	A0A0B4J2B5	19.6 (0.9) [43]	19.1 (0.7) [43]	<0.0001	0.0014
Unclear	IGHV4-34	P06331	14.9 (0.8) [43]	14.5 (0.5) [43]	0.0031	1
Unclear	IGHV5-51	A0A0C4DH38	15.8 (0.5) [43]	15.5 (0.5) [43]	0.0002	0.1079
Unclear	IGKC	P01834	20.1 (0.5) [43]	19.5 (0.5) [43]	<0.0001	<0.0001
Unclear	IGKV1-12	A0A0C4DH73	16.9 (0.6) [43]	16.4 (0.6) [43]	<0.0001	<0.0001
Unclear	IGKV1-5	P01602	16.4 (0.6) [43]	15.8 (0.7) [43]	<0.0001	<0.0001
Unclear	IGKV1-8	A0A0C4DH67	16.3 (0.5) [43]	15.8 (0.5) [43]	<0.0001	<0.0001
Unclear	IGKV1D-33	P01593	17.3 (0.8) [43]	16.8 (0.8) [43]	<0.0001	<0.0001
Unclear	IGKV2-29	A2NJV5	15.9 (0.7) [43]	15.5 (0.6) [43]	0.0001	0.055
Unclear	IGKV2D-24	A0A075B6R9	16.4 (0.9) [43]	16 (0.7) [43]	<0.0001	0.0289
Unclear	IGKV3-20	P01619	18.3 (0.7) [43]	17.8 (0.5) [43]	<0.0001	0.0003
Unclear	IGKV3D-11	A0A0A0MRZ8	17.3 (0.5) [43]	17.1 (0.5) [43]	0.0018	1
Unclear	IGKV3D-20	A0A0C4DH25	17.9 (0.8) [43]	17.5 (0.6) [43]	0.0003	0.1936
Unclear	IGKV4-1	P06312	17.3 (0.6) [43]	16.9 (0.5) [43]	0.0002	0.1006
Unclear	IGLC3	P0DOY3	20.1 (0.7) [43]	19.7 (0.6) [43]	0.0001	0.0387
Unclear	IGLL5	A0A0B4J231	18 (0.7) [43]	17.4 (0.5) [43]	<0.0001	<0.0001
Unclear	IGLV3-25	P01717	15 (1.1) [43]	14.3 (0.7) [43]	<0.0001	0.0044

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	IGLV3-9	A0A075B6K5	15.2 (0.8) [43]	14.4 (0.6) [43]	<0.0001	<0.0001
Unclear	IGSF8	Q969P0	15.5 (0.4) [43]	16.1 (0.3) [43]	<0.0001	<0.0001
Unclear	ITIH1	P19827	15 (0.6) [43]	14.7 (0.5) [43]	0.0131	1
Unclear	ITIH2	P19823	15.1 (0.5) [43]	14.9 (0.4) [43]	0.0029	1
Unclear	ITIH4	Q14624	15.8 (0.5) [43]	15.4 (0.4) [43]	<0.0001	0.0002
Unclear	ITPR2	Q14571	19 (0.8) [43]	18.8 (0.8) [43]	0.0336	1
Unclear	KIAA1549L	H0YDE5	13.7 (0.8) [43]	14.4 (0.6) [43]	<0.0001	0.0026
Unclear	KLK6	Q92876	16.8 (0.7) [43]	17.6 (0.4) [43]	<0.0001	<0.0001
Unclear	KLKB1	H0YAC1	13.9 (0.6) [43]	13.4 (0.5) [43]	<0.0001	0.0001
Unclear	KNG1	P01042	17.2 (0.5) [43]	16.6 (0.4) [43]	<0.0001	<0.0001
Unclear	LAMP2	P13473	15.6 (0.7) [43]	16.3 (0.5) [43]	<0.0001	<0.0001
Unclear	LDHA	P00338	13.1 (1.1) [43]	13.6 (0.6) [43]	0.0007	0.445
Unclear	LDHB	P07195	14.2 (0.6) [43]	14.9 (0.4) [43]	<0.0001	0.0007
Unclear	LGALS3BP	Q08380	16.5 (0.4) [43]	17 (0.3) [43]	<0.0001	<0.0001
Unclear	LRG1	P02750	16.8 (0.4) [43]	16.3 (0.4) [43]	<0.0001	<0.0001
Unclear	LSAMP	H3BLU2	14.9 (0.6) [43]	15.4 (0.4) [43]	<0.0001	<0.0001
Unclear	LUM	P51884	15.9 (0.3) [43]	15.5 (0.2) [43]	<0.0001	<0.0001
Unclear	MAN1C1	Q9NR34	13.3 (0.6) [43]	13.6 (0.5) [43]	0.01	1
Unclear	MMP2	P08253	15.4 (0.2) [43]	15.2 (0.3) [43]	0.0011	0.7584
Unclear	MOG	A0A0G2JHA9	13.7 (0.7) [43]	14.4 (0.7) [43]	<0.0001	0.0037
Unclear	NBL1	A0A087WTY6	18.1 (0.7) [43]	18.4 (0.6) [43]	0.0029	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	NCAM1	P13591	15.7 (0.5) [43]	16.1 (0.4) [43]	<0.0001	0.0001
Unclear	NPC2	E7EMS2	16.4 (0.4) [43]	16.9 (0.4) [43]	<0.0001	<0.0001
Unclear	NRCAM	C9JYY6	15.7 (0.7) [43]	16.2 (0.4) [43]	<0.0001	0.0019
Unclear	NUCB1	Q02818	13.7 (0.4) [43]	14 (0.4) [43]	<0.0001	0.024
Unclear	OGN	P20774	16.7 (0.4) [43]	16.1 (0.5) [43]	<0.0001	<0.0001
Unclear	ORM1	P02763	19.5 (0.4) [43]	19 (0.3) [43]	<0.0001	<0.0001
Unclear	ORM2	P19652	18 (0.4) [43]	17.6 (0.4) [43]	<0.0001	<0.0001
Unclear	PCOLCE	Q15113	16.4 (0.3) [43]	16.2 (0.4) [43]	0.0334	1
Unclear	PCSK1N	Q9UHG2	15.1 (0.5) [43]	15.6 (0.5) [43]	<0.0001	<0.0001
Unclear	PEBP1	P30086	15.4 (0.4) [43]	16.2 (0.4) [43]	<0.0001	<0.0001
Unclear	PEBP4	Q96S96	15.7 (0.6) [43]	16.3 (0.5) [43]	<0.0001	<0.0001
Unclear	PGLYRP2	Q96PD5	14.8 (0.4) [43]	14.5 (0.3) [43]	<0.0001	0.0021
Unclear	PKM	P14618	13.9 (0.6) [43]	14.8 (0.5) [43]	<0.0001	<0.0001
Unclear	PLG	P00747	16.3 (0.4) [43]	15.9 (0.3) [43]	<0.0001	<0.0001
Unclear	PON1	P27169	15.7 (0.6) [43]	15.1 (0.6) [43]	<0.0001	<0.0001
Unclear	PPIB	P23284	15 (0.5) [43]	15.2 (0.5) [43]	0.049	1
Unclear	PRDX2	P32119	14.3 (1.7) [43]	15.1 (0.9) [43]	0.0059	1
Unclear	PROS1	P07225	14.9 (0.3) [43]	15.2 (0.3) [43]	<0.0001	0.0054
Unclear	PTGDS	P41222	20.8 (0.6) [43]	20.9 (0.4) [43]	0.03	1
Unclear	PTPRZ1	P23471	14.7 (0.6) [43]	15.4 (0.4) [43]	<0.0001	<0.0001
Unclear	QSOX1	O00391	14.1 (0.4) [43]	14.3 (0.3) [43]	0.0001	0.0877

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	RARRES2	Q99969	15.9 (0.6) [43]	16.1 (0.4) [43]	0.0351	1
Unclear	SAA4	P35542	15.3 (0.7) [43]	14.7 (0.7) [43]	<0.0001	<0.0001
Unclear	SCG2	P13521	14.1 (0.7) [43]	14.6 (0.5) [43]	<0.0001	0.0002
Unclear	SCG3	Q8WXD2	15.7 (0.6) [43]	16.1 (0.5) [43]	<0.0001	0.004
Unclear	SCG5	P05408-2	15.6 (0.5) [43]	16.2 (0.3) [43]	<0.0001	<0.0001
Unclear	SERPINA1	P01009	18.5 (0.4) [43]	18 (0.3) [43]	<0.0001	<0.0001
Unclear	SERPINA3	P01011	17.2 (0.5) [43]	17 (0.3) [43]	0.0036	1
Unclear	SERPINA4	P29622	15.1 (0.4) [43]	14.8 (0.3) [43]	<0.0001	0.0001
Unclear	SERPINA6	P08185	15.2 (0.4) [43]	15 (0.3) [43]	0.0025	1
Unclear	SERPINA7	P05543	14.9 (0.4) [43]	14.8 (0.4) [43]	0.0344	1
Unclear	SERPINC1	P01008	17.2 (0.3) [43]	16.6 (0.3) [43]	<0.0001	<0.0001
Unclear	SERPIND1	P05546	15.5 (0.3) [43]	15.3 (0.3) [43]	0.0001	0.0738
Unclear	SERPINF1	P36955	17.1 (0.3) [43]	17.7 (0.5) [43]	<0.0001	<0.0001
Unclear	SERPINF2	P08697	16.2 (0.4) [43]	15.9 (0.3) [43]	<0.0001	0.0008
Unclear	SERPING1	P05155	16.5 (0.2) [43]	16.3 (0.2) [43]	<0.0001	0.0001
Unclear	SOD1	P00441	15.7 (0.4) [43]	16.2 (0.3) [43]	<0.0001	<0.0001
Unclear	SOD3	P08294	15.4 (0.4) [43]	16.1 (0.6) [43]	<0.0001	<0.0001
Unclear	SPARCL1	Q14515	15 (0.5) [43]	15.4 (0.3) [43]	<0.0001	0.0033
Unclear	SPP1	P10451	15.8 (0.3) [43]	16.2 (0.3) [43]	<0.0001	<0.0001
Unclear	SULF2	Q8IWU5	14.2 (0.8) [43]	15 (0.4) [43]	<0.0001	0.0001
Unclear	THY1	E9PIM6	17 (0.8) [43]	17.7 (0.6) [43]	<0.0001	0.0016

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	TPI1	P60174	13.4 (0.7) [43]	14.3 (0.6) [43]	<0.0001	<0.0001
Unclear	TPP2	P29144	15.4 (0.7) [43]	14.7 (0.9) [43]	<0.0001	<0.0001
Unclear	TTR	P02766	19.2 (0.6) [43]	20 (0.8) [43]	<0.0001	<0.0001
Unclear	UBC	F5H265	15.7 (0.5) [43]	16.3 (0.3) [43]	<0.0001	<0.0001
Unclear	VCAN	P13611	13.6 (0.5) [43]	14.1 (0.3) [43]	0.0001	0.0583
Unclear	VGF	O15240	14.6 (0.8) [43]	15.3 (0.5) [43]	<0.0001	0.0002
Unclear	VIP	P01282	18.1 (0.9) [43]	17.7 (0.5) [43]	0.0057	1
Unclear	VTN	P04004	17.2 (0.5) [43]	16.8 (0.4) [43]	<0.0001	0.0001
Unclear		B4E1Z4	15.2 (0.4) [43]	14.7 (0.3) [43]	<0.0001	<0.0001
Unclear		A0A0J9YY99	15.5 (1.4) [43]	15.2 (1.4) [43]	0.0002	0.1351
Unclear	APLP2	Q06481	14.5 (0.8) [42]	15 (0.5) [43]	0.0005	0.3495
Unclear	CALR	P27797	13.6 (0.4) [42]	14 (0.4) [43]	<0.0001	0.0194
Unclear	CD99L2	Q8TCZ2	16.4 (0.7) [42]	16.9 (0.5) [43]	<0.0001	0.0003
Unclear	CDH13	P55290	15.2 (0.5) [42]	15.6 (0.4) [43]	<0.0001	0.0014
Unclear	CLCNKB	A0A087X136	16.1 (0.6) [42]	16.5 (0.7) [43]	0.0002	0.1319
Unclear	CPVL	Q9H3G5	14.2 (0.5) [42]	14.8 (0.5) [43]	<0.0001	<0.0001
Unclear	CRTAC1	A0A0C4DFP6	15.3 (0.5) [42]	15.6 (0.4) [43]	<0.0001	0.0034
Unclear	CTBS	Q01459	14.4 (0.4) [42]	14.8 (0.5) [43]	<0.0001	0.0001
Unclear	EPHA4	E9PG71	15.2 (1.1) [42]	15.5 (0.8) [43]	0.0199	1
Unclear	F9	P00740	12.8 (0.6) [42]	13.1 (0.6) [43]	0.0248	1
Unclear	FUCA1	P04066	14.2 (0.6) [42]	14.6 (0.6) [43]	<0.0001	0.003

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	GOT1	P17174	14.4 (0.4) [42]	15 (0.4) [43]	<0.0001	<0.0001
Unclear	GPR37	O15354	15.3 (0.4) [42]	15.9 (0.3) [43]	<0.0001	<0.0001
Unclear	IGFALS	P35858	14.5 (0.5) [42]	14.1 (0.4) [43]	0.0005	0.3649
Unclear	IGHV2-26	A0A0B4J1V2	13.6 (0.8) [43]	13 (0.7) [42]	<0.0001	<0.0001
Unclear	IGKV2-28	A0A075B6P5	16.3 (0.6) [42]	15.7 (0.6) [43]	<0.0001	<0.0001
Unclear	ISLR	O14498	15.3 (0.2) [43]	15 (0.3) [42]	<0.0001	<0.0001
Unclear	LMAN2	D6RBV2	15.1 (0.5) [42]	15.4 (0.4) [43]	0.0021	1
Unclear	NCAM2	H9KV31	15 (0.4) [42]	15.6 (0.4) [43]	<0.0001	<0.0001
Unclear	NEGR1	Q7Z3B1	15.1 (1) [42]	15.7 (0.6) [43]	<0.0001	0.0048
Unclear	NELL2	F8VVB6	15.1 (0.7) [42]	15.7 (0.5) [43]	<0.0001	0.0001
Unclear	NID1	P14543	13.7 (0.5) [43]	13.5 (0.4) [42]	0.0133	1
Unclear	NPTX1	Q15818	15.5 (1) [42]	16 (0.7) [43]	0.0004	0.2581
Unclear	NTM	Q9P121-4	14.9 (0.8) [42]	15.3 (0.5) [43]	0.0117	1
Unclear	OAF	Q86UD1	15.2 (0.4) [42]	14.8 (0.3) [43]	<0.0001	0.0011
Unclear	PAM	P19021	15 (0.5) [42]	15.4 (0.4) [43]	<0.0001	0.0021
Unclear	PENK	P01210	14.9 (0.6) [42]	15.5 (0.5) [43]	<0.0001	0.0013
Unclear	PLXDC2	Q6UX71	14.9 (0.4) [42]	15.2 (0.4) [43]	<0.0001	0.0021
Unclear	PRCP	P42785	14.9 (0.8) [42]	15.2 (0.5) [43]	0.0104	1
Unclear	PRNP	A2A2V1	13.8 (0.7) [42]	14.1 (0.5) [43]	0.0018	1
Unclear	PTPRD	P23468	14.1 (0.6) [42]	14.7 (0.4) [43]	<0.0001	<0.0001
Unclear	PTPRG	P23470	14.9 (0.5) [42]	15.2 (0.4) [43]	0.0002	0.1009

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	SELENBP1	Q13228	14.4 (0.8) [42]	14.8 (0.4) [43]	0.0214	1
Unclear	WFIKK2	C9J6G4	15 (0.6) [42]	15.4 (0.7) [43]	<0.0001	0.012
Unclear	APLP1	P51693-2	14.8 (0.8) [41]	15.5 (0.7) [43]	<0.0001	0.0146
Unclear	C1RL	Q9NZP8	14.1 (0.6) [43]	13.6 (0.5) [41]	<0.0001	0.0004
Unclear	CACNA2D1	P54289	14.6 (0.5) [41]	14.9 (0.4) [43]	<0.0001	0.012
Unclear	CGREF1	Q99674	13.5 (0.8) [41]	13.9 (0.6) [43]	0.0006	0.4134
Unclear	CNTN2	A0A1W2PQ11	15.7 (0.3) [41]	16.2 (0.4) [43]	<0.0001	<0.0001
Unclear	CSF1	P09603	14.2 (0.4) [41]	14.6 (0.4) [43]	<0.0001	0.0163
Unclear	CTSH	A0A087X0D5	14.8 (0.6) [41]	15.4 (0.6) [43]	<0.0001	<0.0001
Unclear	HEXA	H3BP20	14.2 (0.7) [41]	14.7 (0.5) [43]	0.0001	0.0646
Unclear	IGHG4	A0A286YFJ8	16.1 (1.1) [42]	15.8 (1) [42]	<0.0001	0.0072
Unclear	MCAM	P43121	14.6 (0.8) [41]	14.9 (0.6) [43]	0.0088	1
Unclear	MDH1	P40925	14.9 (0.5) [41]	15.6 (0.5) [43]	<0.0001	<0.0001
Unclear	NEO1	Q92859	14.7 (0.5) [41]	15.2 (0.4) [43]	<0.0001	0.0001
Unclear	NFASC	O94856	14.4 (0.5) [41]	15 (0.4) [43]	<0.0001	<0.0001
Unclear	NPDC1	Q5SPY9	13.3 (0.5) [41]	13.8 (0.5) [43]	<0.0001	0.0012
Unclear	NPTXR	A0A1X7SBT7	15.4 (0.6) [41]	15.7 (0.5) [43]	0.0012	0.8239
Unclear	OMG	P23515	15.5 (0.5) [41]	16.2 (0.4) [43]	<0.0001	<0.0001
Unclear	PRELP	P51888	14.5 (0.4) [41]	13.8 (0.5) [43]	<0.0001	<0.0001
Unclear	RNASET2	A0A087WZM2	14.7 (0.4) [41]	15 (0.4) [43]	<0.0001	0.0007
Unclear	SEMA7A	O75326	14.2 (0.7) [41]	14.8 (0.6) [43]	<0.0001	0.0001

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	SERPINI1	Q99574	14.2 (0.5) [41]	14.9 (0.5) [43]	<0.0001	<0.0001
Unclear	SEZ6L2	A0A087WYL5	15.1 (0.7) [41]	15.5 (0.5) [43]	0.0004	0.2846
Unclear	SIRPA	P78324	14.5 (0.6) [41]	15 (0.6) [43]	<0.0001	<0.0001
Unclear	SOD2	P04179	13.4 (0.4) [42]	13.8 (0.3) [42]	<0.0001	0.0001
Unclear	SPOCK1	Q08629	13.7 (0.4) [41]	14.3 (0.5) [43]	<0.0001	<0.0001
Unclear	TNXB	A0A140TA41	13.4 (0.5) [42]	13.2 (0.5) [42]	0.0033	1
Unclear	TPP1	O14773	14.3 (0.5) [41]	14.9 (0.6) [43]	<0.0001	<0.0001
Unclear	VASN	Q6EMK4	14.5 (0.3) [41]	14.7 (0.2) [43]	<0.0001	0.0148
Unclear	ADGRB2	A2A3C1	14.8 (0.7) [40]	15.3 (0.6) [43]	<0.0001	0.0001
Unclear	ART3	E7ESB3	14.6 (0.4) [40]	15 (0.4) [43]	<0.0001	0.0003
Unclear	CUTA	O60888	14.7 (1.1) [40]	15.2 (0.8) [43]	0.0128	1
Unclear	DSC2	Q02487	14 (0.5) [41]	14.2 (0.5) [42]	0.0122	1
Unclear	ERN1	O75460	15.9 (1.2) [41]	15.4 (1.3) [42]	0.0084	1
Unclear	EXTL2	Q9UBQ6	14.6 (0.6) [40]	15 (0.5) [43]	0.0001	0.0355
Unclear	FMOD	Q06828	14.5 (0.3) [41]	13.8 (0.6) [42]	<0.0001	<0.0001
Unclear	FRZB	Q92765	14.8 (0.7) [41]	14.4 (0.7) [42]	0.0203	1
Unclear	GSTP1	P09211	14.2 (0.6) [40]	15.2 (0.7) [43]	<0.0001	<0.0001
Unclear	LRRC4B	Q9NT99	14.4 (0.6) [40]	15 (0.4) [43]	<0.0001	<0.0001
Unclear	MEGF8	Q7Z7M0	14.2 (0.5) [40]	14.5 (0.4) [43]	<0.0001	0.0112
Unclear	NCAN	O14594	15 (0.5) [40]	15.4 (0.4) [43]	<0.0001	<0.0001
Unclear	NRXN3	A0A0U1RQC5	14.1 (0.6) [40]	14.5 (0.5) [43]	<0.0001	0.0026

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	PIK3IP1	Q96FE7-4	15 (0.5) [40]	15.4 (0.4) [43]	<0.0001	0.0013
Unclear	RNASE4	P34096	13.9 (0.3) [40]	13.6 (0.4) [43]	0.0003	0.1699
Unclear	SEZ6L	B0QYH4	14.2 (0.4) [40]	14.4 (0.5) [43]	0.0121	1
Unclear	SPON1	Q9HCB6	14 (0.7) [40]	14.4 (0.6) [43]	0.0002	0.1622
Unclear	BASP1	P80723	11.1 (0.9) [40]	12.1 (0.8) [42]	<0.0001	0.0001
Unclear	BPNT2	Q9NX62	13.4 (0.6) [39]	14 (0.6) [43]	<0.0001	0.0001
Unclear	CADM1	A0A087X0T8	15.5 (0.7) [39]	16.1 (0.5) [43]	<0.0001	0.0014
Unclear	CADM2	Q8N3J6	14.6 (0.4) [39]	14.9 (0.6) [43]	0.0006	0.4248
Unclear	CDH6	D6RF86	12.9 (0.5) [40]	13.2 (0.5) [42]	<0.0001	0.0073
Unclear	DPP7	Q9UHL4	13.8 (0.5) [39]	14.1 (0.7) [43]	<0.0001	0.0102
Unclear	GSTO1	P78417	13.4 (0.8) [39]	14 (0.6) [43]	0.0007	0.4804
Unclear	IL6ST	P40189	14.3 (0.4) [39]	14.6 (0.4) [43]	<0.0001	<0.0001
Unclear	JCHAIN	D6RD17	15.1 (1.6) [42]	14.4 (1.2) [40]	0.0003	0.204
Unclear	NRN1	A0A087WWT2	15.2 (0.4) [39]	15.5 (0.4) [43]	<0.0001	0.0197
Unclear	OMD	Q99983	14.4 (0.5) [40]	13.9 (0.7) [42]	<0.0001	0.0034
Unclear	PEPD	P12955	12.3 (0.6) [42]	12.6 (0.4) [40]	0.0105	1
Unclear	POMGNT1	Q8WZA1	14.1 (0.4) [39]	14.4 (0.4) [43]	0.0012	0.8229
Unclear	SHBG	I3L145	13.8 (0.5) [40]	13.5 (0.3) [42]	0.0001	0.0523
Unclear	SORT1	Q99523	13.8 (0.3) [39]	14.2 (0.4) [43]	0.0002	0.1623
Unclear	SUSD5	O60279	12.7 (0.5) [40]	13 (0.4) [42]	0.0006	0.4186
Unclear	VCAM1	P19320	13.8 (0.4) [40]	13.7 (0.4) [42]	0.0318	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	CPN2	P22792	14.2 (0.7) [42]	13.9 (0.6) [39]	0.0107	1
Unclear	CTSZ	Q9UBR2	14.9 (0.4) [39]	15.5 (0.6) [42]	<0.0001	0.0001
Unclear	IGF2	P01344	14.8 (0.5) [41]	14.4 (0.6) [40]	0.0092	1
Unclear	IGLV3-21	P80748	15.4 (1.2) [41]	14.7 (1) [40]	0.0005	0.3661
Unclear	MARCKS	P29966	11.3 (0.7) [39]	11.8 (0.7) [42]	0.0003	0.1964
Unclear	NECTIN1	Q15223	14.1 (0.5) [38]	14.5 (0.3) [43]	<0.0001	0.0003
Unclear	NPPC	P23582	13.9 (0.6) [38]	14.1 (0.6) [43]	0.0073	1
Unclear	PLD3	Q8IV08	14.5 (0.7) [38]	14.9 (0.6) [43]	0.0001	0.0498
Unclear	PTPRS	Q13332	13.9 (0.7) [38]	14.7 (0.3) [43]	<0.0001	<0.0001
Unclear	RGMB	J3KNF6	14.6 (0.7) [38]	14.9 (0.6) [43]	0.0003	0.1979
Unclear	SPOCK3	Q9BQ16	14.5 (0.4) [38]	15.2 (0.6) [43]	<0.0001	0.0011
Unclear	TMEM132A	Q24JP5	13.7 (0.5) [39]	14.1 (0.5) [42]	0.0016	1
Unclear	VSTM2A	B5MCX6	14.5 (0.6) [38]	14.8 (0.6) [43]	0.0006	0.3958
Unclear	CYCS	C9JFR7	12.8 (0.7) [38]	13.3 (0.5) [42]	0.0001	0.0788
Unclear	FGFR2	A0A0A0MR25	15.2 (0.8) [37]	15.8 (0.6) [43]	0.0001	0.0408
Unclear	GDI2	P50395	12.8 (1.1) [38]	13.7 (0.7) [42]	0.0001	0.0574
Unclear	GGH	Q92820	14.4 (0.3) [38]	14.6 (0.4) [42]	0.0002	0.1146
Unclear	H4C1	P62805	12.8 (1.2) [38]	13.5 (1.1) [42]	0.0009	0.5841
Unclear	IGKV3D-15	A0A087WSY6	16.9 (0.8) [41]	16.6 (0.6) [39]	0.0019	1
Unclear	SYT2	Q8N9I0	18.1 (0.9) [41]	17.5 (0.6) [39]	<0.0001	0.0327
Unclear	TNR	Q92752	13.2 (0.4) [37]	13.4 (0.5) [43]	0.0011	0.7084

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	ACTA2	P62736	14.7 (1) [36]	15.5 (0.9) [43]	0.0001	0.035
Unclear	APOL1	O14791	13.6 (0.7) [42]	12.8 (0.8) [37]	<0.0001	0.0003
Unclear	CACHD1	A0A0A0MQY7	13.1 (0.5) [36]	13.3 (0.4) [43]	0.004	1
Unclear	COLEC12	Q5KU26	14.3 (0.6) [37]	14.6 (0.4) [42]	0.0102	1
Unclear	ICAM5	Q9UMF0	12.6 (0.8) [39]	13.2 (0.6) [40]	<0.0001	0.0004
Unclear	PLXNB1	O43157	13 (0.5) [38]	13.1 (0.5) [41]	0.0307	1
Unclear	PROC	E7END6	13 (0.5) [40]	13.3 (0.5) [39]	0.0004	0.2611
Unclear	SEZ6	Q53EL9	13.5 (0.7) [38]	13.9 (0.6) [41]	0.0009	0.5907
Unclear	APOC2	A0A024R0T9	14.9 (1.1) [42]	14.4 (0.8) [36]	0.0194	1
Unclear	CTSS	P25774	13.8 (0.5) [38]	14.1 (0.4) [40]	0.0045	1
Unclear	GNPTG	Q9UJJ9	15.3 (0.4) [35]	15.4 (0.4) [43]	0.0134	1
Unclear	IGHV3-38	A0A0C4DH36	15.2 (0.6) [38]	15 (0.5) [40]	0.0053	1
Unclear	IL31RA	Q8NI17	23.6 (0.4) [41]	24.4 (0.6) [37]	<0.0001	<0.0001
Unclear	MAG	P20916	12.9 (0.4) [37]	13.5 (0.5) [41]	<0.0001	<0.0001
Unclear	MAN2A2	P49641	13.8 (0.6) [35]	14.1 (0.5) [43]	0.0054	1
Unclear	TRBV7-2	A0A1B0GXF2	15.6 (0.5) [39]	15.1 (0.5) [39]	<0.0001	<0.0001
Unclear	ENPP4	Q9Y6X5	12.6 (0.4) [36]	13 (0.5) [41]	<0.0001	0.0005
Unclear	EPDR1	Q9UM22	13 (0.8) [34]	13.7 (0.6) [43]	<0.0001	0.0137
Unclear	FAM3C	C9JP35	14.5 (0.5) [35]	14.9 (0.5) [42]	0.0001	0.0335
Unclear	FUCA2	Q9BTY2	14.2 (1) [39]	14.6 (0.9) [38]	0.0012	0.8204
Unclear	GALNT2	Q10471	13.7 (0.4) [36]	13.9 (0.3) [41]	0.0048	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	SORCS3	Q9UPU3	12.9 (0.8) [36]	13.5 (0.8) [41]	0.0007	0.4719
Unclear	CNDP1	J3KRP0	17 (0.8) [33]	17.5 (0.7) [43]	0.0003	0.1729
Unclear	CTSF	Q9UBX1	14.7 (0.3) [33]	14.8 (0.3) [43]	0.0046	1
Unclear	KRT1	P04264	14.8 (1.5) [34]	15.3 (1.7) [42]	0.0311	1
Unclear	LRP1	Q07954	13.5 (0.6) [33]	13.7 (0.4) [43]	0.014	1
Unclear	ADAM29	Q9UKF5	15.6 (0.8) [34]	15.1 (0.7) [41]	0.0147	1
Unclear	CACNA2D1	P54289-2	14.6 (0.5) [34]	15.1 (0.5) [41]	<0.0001	0.0001
Unclear	FSTL4	Q6MZW2	12.8 (0.8) [35]	13.2 (0.7) [40]	0.0005	0.3025
Unclear	FXVD6	Q9H0Q3	14.3 (0.7) [32]	15.2 (0.6) [43]	<0.0001	0.013
Unclear	GRIA4	G3V164	12.7 (0.6) [36]	12.9 (0.5) [39]	0.0177	1
Unclear	ITM2B	Q9Y287	12.7 (1.2) [32]	13.9 (1.5) [43]	0.0024	1
Unclear	SKP1	E5RJR5	13.4 (0.6) [33]	14.2 (0.6) [42]	<0.0001	0.0158
Unclear	ATRN	O75882	13.9 (0.4) [33]	14 (0.3) [41]	0.0202	1
Unclear	NAGLU	P54802	13 (0.8) [33]	13.4 (0.8) [41]	0.0087	1
Unclear	ADGRB3	O60242	11.1 (0.6) [35]	11.4 (0.6) [38]	0.0001	0.0407
Unclear	GOLM1	Q8NBJ4	13.2 (0.5) [30]	13.5 (0.5) [43]	<0.0001	0.0104
Unclear	SYNE3	G3V533	14.6 (0.9) [40]	14.5 (0.8) [33]	0.011	1
Unclear	CLN5	A0A024R644	13.3 (1) [35]	13.9 (0.6) [37]	0.0147	1
Unclear	HGFAC	D6RAR4	14.3 (0.5) [40]	13.9 (0.5) [32]	0.0013	0.8939
Unclear	PLXNB2	O15031	13.6 (0.6) [30]	13.9 (0.6) [42]	0.0093	1
Unclear	TGFBR3	Q03167	12.5 (0.6) [32]	12.9 (0.7) [40]	0.0271	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	B4GALT1	P15291	14.1 (0.5) [36]	13.9 (0.5) [35]	0.0259	1
Unclear	CARTPT	Q16568	13.1 (0.8) [29]	13.7 (0.6) [42]	0.0001	0.0865
Unclear	CNTFR	P26992	12.8 (1.1) [30]	13.1 (0.8) [41]	0.0479	1
Unclear	IGLV8-61	A0A075B6I0	15 (1.1) [38]	14.8 (0.8) [33]	0.0127	1
Unclear	ADIPOQ	Q15848	12.2 (0.6) [36]	11.8 (0.5) [34]	<0.0001	0.0152
Unclear	ASAH1	A0A1B0GTM3	14.5 (0.4) [29]	14.8 (0.5) [41]	<0.0001	<0.0001
Unclear	PCDH1	Q08174	13 (0.6) [29]	13.5 (0.5) [41]	<0.0001	0.0004
Unclear	SHISA6	Q6ZSJ9	13.8 (0.4) [31]	14.1 (0.5) [39]	0.0001	0.0776
Unclear	HYOU1	A0A087X054	13.9 (0.4) [28]	14.3 (0.3) [41]	<0.0001	0.0037
Unclear	PGAM1	P18669	13.9 (1) [26]	14.7 (0.8) [43]	0.0003	0.1685
Unclear	PGK1	P00558	13.4 (1.1) [29]	14 (0.8) [40]	0.008	1
Unclear	PODXL2	Q9NZ53	11.8 (1.1) [34]	12.7 (0.8) [35]	0.0002	0.1199
Unclear	SLITRK3	O94933	13.4 (0.5) [36]	13.6 (0.5) [33]	0.0002	0.1119
Unclear	TXN	P10599	16 (0.8) [26]	16.3 (0.4) [43]	0.0333	1
Unclear	FAT2	Q9NYQ8	12.8 (0.6) [32]	12.9 (0.7) [36]	0.0286	1
Unclear	IGKV2D-29	A0A075B6S2	14.5 (0.6) [34]	14 (0.6) [33]	0.0003	0.2185
Unclear	IGLV3-10	A0A075B6K4	15.2 (1.3) [33]	14.7 (0.8) [34]	0.0022	1
Unclear	ADGRL3	E7EN28	13 (1.2) [27]	13.7 (0.9) [39]	0.001	0.6416
Unclear	IGFBP5	P24593	12 (0.6) [26]	12.5 (0.7) [40]	0.0053	1
Unclear	PRDX1	Q06830	14.6 (1.8) [25]	15.7 (1.1) [41]	0.0083	1
Unclear	TNFRSF21	O75509	14.4 (0.4) [27]	14.8 (0.4) [39]	0.0003	0.182

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	IGLV6-57	P01721	14.5 (0.8) [33]	13.6 (0.8) [32]	<0.0001	0.0049
Unclear	MST1	G3XAK1	13 (0.4) [31]	12.6 (0.6) [34]	0.0001	0.0433
Unclear	PSAP	C9JIZ6	13.6 (0.9) [23]	14.3 (0.9) [42]	0.0041	1
Unclear	ZNF511-PRAP1	H7BY64	13.8 (0.3) [23]	14.1 (0.6) [42]	0.0494	1
Unclear	CCDC93	F8W9X7	14.2 (0.4) [28]	14.5 (0.5) [36]	0.0047	1
Unclear	CTSA	P10619	12.8 (0.4) [26]	13.4 (0.6) [38]	<0.0001	0.0308
Unclear	RTN4RL2	Q86UN3	14.1 (0.6) [25]	14.6 (0.5) [39]	0.0001	0.0435
Unclear	MANBA	O00462	13.1 (0.5) [26]	13.3 (0.4) [37]	0.021	1
Unclear	PRKCSH	K7ELL7	14.6 (0.8) [25]	15.1 (0.5) [38]	0.0012	0.7774
Unclear	MIF	P14174	14.9 (0.8) [24]	15.5 (0.6) [38]	0.006	1
Unclear	CBLN1	P23435	12.3 (0.9) [27]	12.6 (0.8) [34]	0.003	1
Unclear	GLDN	Q6ZMI3	13.5 (0.6) [20]	14.1 (0.7) [41]	0.0001	0.0539
Unclear	IGLV7-46	A0A075B6I9	15.4 (1.1) [36]	15.1 (0.9) [25]	0.0002	0.113
Unclear	GPLD1	P80108	14 (0.6) [34]	13.5 (0.5) [26]	0.0003	0.2331
Unclear	MIA	Q16674	16 (0.5) [35]	15.1 (0.5) [25]	<0.0001	<0.0001
Unclear	PRDX6	P30041	14 (1.4) [20]	14.7 (1.2) [40]	0.0299	1
Unclear	SPINT2	K7EM91	12.6 (0.6) [27]	12.9 (0.5) [33]	0.0016	1
Unclear	ACYP2	P14621	11.5 (0.5) [20]	12.1 (0.6) [39]	0.0002	0.1641
Unclear	CCN3	P48745	14.2 (0.5) [31]	13.5 (0.4) [28]	<0.0001	<0.0001
Unclear	IGSF21	Q96ID5	14.9 (0.6) [21]	14 (1.7) [38]	0.0256	1
Unclear	NTNG1	Q9Y2I2	11.7 (0.8) [25]	12.2 (0.8) [34]	0.0034	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	HSPA8	P11142	13 (1.8) [15]	14.3 (1.1) [42]	0.0043	1
Unclear	IGHV1-2	P23083	15.4 (0.8) [29]	15.1 (0.5) [28]	0.0486	1
Unclear	IGKV1-27	A0A075B6S5	15.8 (0.8) [27]	15.3 (0.7) [30]	0.019	1
Unclear	PTPRK	E9PGC5	12 (0.4) [24]	12.4 (0.5) [33]	0.0021	1
Unclear	CAMK2A	Q9UQM7	13.6 (0.6) [24]	14.3 (0.7) [32]	0.0004	0.2625
Unclear	CRP	P02741	14.4 (0.8) [31]	14.1 (1) [25]	0.04	1
Unclear	CSPG5	A0A087WUT8	14.3 (0.4) [19]	14.7 (0.4) [36]	<0.0001	0.0274
Unclear	SEC23IP	Q9Y6Y8	13.5 (0.5) [19]	14.1 (0.7) [36]	0.0008	0.5193
Unclear	TUBA1B	P68363	12.2 (1.8) [13]	16.6 (1.6) [42]	0.0001	0.0778
Unclear	SERPINA1	A0A0G2JRN3	18 (2.9) [30]	18 (2.3) [24]	0.028	1
Unclear	CETP	P11597	14.9 (0.5) [20]	15.2 (0.4) [32]	0.0065	1
Unclear	PCSK1	P29120	11.7 (2.7) [19]	13.1 (2.2) [33]	0.1195	1
Unclear	IGKV2-40	A0A087WW87	13.8 (0.8) [26]	13.5 (0.6) [25]	0.0002	0.1131
Unclear	MMRN2	Q9H8L6	14.2 (0.4) [17]	14.4 (0.3) [34]	0.0465	1
Unclear	C1QTNF3-AMACR	E9PGA6	13.7 (0.8) [20]	12.2 (2.3) [30]	0.0212	1
Unclear	CAT	P04040	15.3 (1.4) [27]	14.4 (1.5) [23]	0.0425	1
Unclear	CCHCR1	A0A0G2JHN4	14.4 (1.6) [20]	13.6 (2.1) [30]	0.0144	1
Unclear	PTPRF	P10586	12 (1.4) [17]	13.4 (1.3) [32]	0.0061	1
Unclear	ABHD14B	Q96IU4	12.2 (1) [22]	12.5 (0.7) [26]	0.0104	1
Unclear	ATP1B1	P05026	12 (0.9) [10]	13.3 (1.2) [38]	0.0001	0.0659
Unclear	PROZ	P22891	13.6 (0.9) [26]	13.1 (0.5) [22]	0.0135	1

Group	Gene name	Uniprot ID	Lumbar mean (SD) [N]	Ventricular mean (SD) [N]	<i>p</i> value	<i>p</i> adjust
Unclear	CHST15	Q7LFX5	13.5 (0.5) [20]	13 (0.5) [25]	0.0126	1
Unclear	RGMA	A0A0A0MTQ4	14.6 (0.4) [17]	14.8 (0.6) [28]	0.0252	1
Unclear	CNTNAP2	Q9UHC6	12.8 (0.5) [18]	13.5 (0.7) [26]	0.0312	1
Unclear	ISLR2	Q6UXK2	16.9 (1.8) [19]	14.5 (2.4) [25]	0.0012	0.8324
Unclear	CANT1	Q8WVQ1	12.9 (0.5) [11]	13.4 (0.3) [32]	0.0019	1
Unclear	HBG2	P69892	14 (2.4) [18]	14.5 (2.3) [25]	0.1886	1
Unclear	TAC1	P20366	14.1 (0.8) [16]	14.7 (0.6) [27]	0.015	1
Unclear	DPP6	E9PF59	12.4 (0.7) [15]	13 (0.7) [27]	0.0045	1
Unclear	KRT14	P02533	11 (2.4) [17]	11.8 (2.9) [23]	0.1487	1
Unclear	IGKV1D-13	A0A0B4J2D9	16.1 (1.1) [18]	15.4 (0.7) [21]	0.0067	1
Unclear	H2BC12	O60814	13.9 (0.5) [12]	14.4 (1) [26]	0.003	1
Unclear	HYAL1	Q12794	16.2 (1.1) [18]	15.8 (0.7) [19]	0.0006	0.4311
Unclear	COMP	G3XAP6	12 (1.1) [14]	11.3 (0.9) [18]	0.033	1
Unclear	KNG1	P01042-2	8 (0.7) [15]	7.6 (0.7) [15]	0.034	1
Unclear	KHSRP	A0A087WTP3	13.7 (0.4) [17]	13.5 (0.3) [12]	0.0089	1
Unclear	GC	D6RF35	17.6 (0.8) [15]	17.6 (0.5) [13]	0.0096	1