RiboSeq_Report

28 März 2022

The following document is a report on the alignment of multiple Ribo-Seq datasets against NMD and RI transcripts as well as against the human genome. These alignments are then analyzed in respect to their mapping against the previously determined unique Regions of the also previously determined split-ORFs.

Alignment against NMD transcripts

The thresholds for each dataset are determined by calculating the average relative read count (number of reads per bp) aligning to randomly selected regions of the 3'UTR-regions of the longest isoforms of all coding transcripts.

Table 1: Thresholds for each dataset

	Threshold
Adeno_ctrl1_vs_NMD	0.0004152
Adeno_ctrl2_vs_NMD	0.0002131
Adeno_sh1_vs_NMD	0.0002607
Adeno_sh2_vs_NMD	0.0003409
Harr_vs_NMD	0.0131738
hs_iPScm_01_Ri_vs_NMD	0.0197158
RiboLace_vs_NMD	0.0000333
NSC_vs_NMD	0.0000414
hela_WT_vs_NMD	0.0000255
hela_DENR_KO_1_vs_NMD	0.0000540
hela_DENR_KO_2_vs_NMD	0.0000378
Leukemia_vs_NMD	0.2277722
LTM_rep1_vs_NMD	0.0032976
LTM_rep2_vs_NMD	0.0070941

Table 2: Average relative counts of non-unique regions for each dataset

	Average relative count
Adeno_ctrl1_vs_NMD	0.0003058
Adeno_ctrl2_vs_NMD	0.0002600
Adeno_sh1_vs_NMD	0.0001411
Adeno_sh2_vs_NMD	0.0004867
Harr_vs_NMD	0.0000159
hs_iPScm_01_Ri_vs_NMD	0.0175923
RiboLace_vs_NMD	0.0000061
NSC_vs_NMD	0.0000189
hela_WT_vs_NMD	0.0000336

	Average relative count
hela_DENR_KO_1_vs_NMD	0.0000529
hela_DENR_KO_2_vs_NMD	0.0000343
Leukemia_vs_NMD	0.0278560
LTM_rep1_vs_NMD	0.0000129
LTM_rep2_vs_NMD	0.0000210

Table 3: Regions above the threshold

	Number of unique regions with relative count >= threshold
Adeno_ctrl1_vs_NMD	131
Adeno_ctrl2_vs_NMD	125
Adeno_sh1_vs_NMD	65
Adeno_sh2_vs_NMD	219
Harr_vs_NMD	3
hs_iPScm_01_Ri_vs_NMD	1888
RiboLace_vs_NMD	5
NSC_vs_NMD	25
hela_WT_vs_NMD	20
hela_DENR_KO_1_vs_NMD	26
hela_DENR_KO_2_vs_NMD	21
Leukemia_vs_NMD	616
LTM_rep1_vs_NMD	5
LTM_rep2_vs_NMD	6

The following table shows the top five unique regions with a relative count above the threshold (if available).

Table 4: Adeno_ctrl1_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000067225|ENST00000567118:ORF-26787:158:1709	1097	1252	210	1.354840
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	19	0.904762
ENSG00000085662|ENST00000434222:ORF-4755:40:832	743	792	40	0.816327
ENSG00000184009|ENST00000572105:ORF-23861:124:721	363	401	25	0.657895
ENSG00000182718|ENST00000676687:ORF-51838:146:614	448	468	9	0.450000

Table 5: Adeno_ctrl2_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000067225|ENST00000567118:ORF-26787:158:1709	1097	1252	162	1.045160
ENSG00000085662|ENST00000434222:ORF-4755:40:832	743	792	35	0.714286
ENSG00000184009|ENST00000572105:ORF-23861:124:721	363	401	27	0.710526
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	12	0.571429
ENSG00000161960|ENST00000581544:ORF-29923:162:1008	618	737	49	0.411765

Table 6: Adeno_sh1_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000085662|ENST00000434222:ORF-4755:40:832	743	792	27	0.551020
ENSG00000067225|ENST00000567118:ORF-26787:158:1709	1097	1252	70	0.451613
ENSG00000161016|ENST00000529920:ORF-17529:541:874	0	57	21	0.368421
ENSG00000184009|ENST00000572105:ORF-23861:124:721	363	401	9	0.236842
ENSG00000074800|ENST00000646370:ORF-30141:120:426	182	239	10	0.175439

Table 7: Adeno_sh2_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000085662|ENST00000434222:ORF-4755:40:832	743	792	106	2.163270
ENSG00000067225|ENST00000567118:ORF-26787:158:1709	1097	1252	293	1.890320
ENSG00000184009|ENST00000572105:ORF-23861:124:721	363	401	41	1.078950
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	19	0.904762
ENSG00000161016|ENST00000529920:ORF-17529:541:874	0	57	45	0.789474

Table 8: Harr_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000173559|ENST00000307849:ORF-905:479:884	302	405	190	1.8446600
ENSG00000100142|ENST00000483713:ORF-8837:89:320	91	147	2	0.0357143
ENSG00000204152|ENST00000478381:ORF-8874:146:446	106	204	3	0.0306122

Table 9: hs_iPScm_01_Ri_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000187555|ENST00000563961:ORF-16783:137:413	33	76	8486	197.3490
ENSG00000140416|ENST00000558347:ORF-15382:75:549	446	474	958	34.2143
ENSG00000184009|ENST00000572105:ORF-23861:124:721	363	401	1247	32.8158
ENSG00000166794|ENST00000680158:ORF-53099:148:520	345	372	661	24.4815
ENSG00000121769|ENST00000498148:ORF-21571:59:329	246	270	496	20.6667

Table 10: RiboLace_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000178665|ENST00000411863:ORF-2174:726:882	87	156	12	0.1739130
ENSG00000178665|ENST00000411863:ORF-2176:901:2314	0	168	12	0.0714286
ENSG00000075089|ENST00000553038:ORF-15985:1436:1964	476	528	3	0.0576923
ENSG00000187555|ENST00000563961:ORF-16783:137:413	33	76	2	0.0465116
ENSG00000146067|ENST00000506955:ORF-20937:2864:4211	0	145	2	0.0137931

Table 11: NSC_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000161016|ENST00000529920:ORF-17529:541:874	0	57	17	0.2982460
ENSG00000204628|ENST00000504325:ORF-22961:89:440	281	351	15	0.2142860
ENSG00000196873|ENST00000611426:ORF-27301:119:296	154	177	4	0.1739130
ENSG00000097021|ENST00000377860:ORF-3601:58:910	733	806	8	0.1095890
ENSG00000147996|ENST00000469921:ORF-13530:119:296	154	177	2	0.0869565

Table 12: hela_WT_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	3	0.1428570
ENSG00000161016|ENST00000529920:ORF-17529:541:874	0	57	7	0.1228070
ENSG00000105220|ENST00000647446:ORF-38477:45:996	804	883	6	0.0759494
ENSG00000113387|ENST00000511615:ORF-16804:68:323	195	255	4	0.0666667
ENSG00000115368|ENST00000436347:ORF-4692:47:317	216	248	2	0.0625000

Table 13: hela_DENR_KO_1_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	9	0.4285710
ENSG00000075785|ENST00000490093:ORF-8637:211:682	401	424	4	0.1739130
ENSG00000106211|ENST00000674965:ORF-54625:383:683	21	44	3	0.1304350
ENSG00000178035|ENST00000677480:ORF-46926:70:442	324	372	4	0.0833333
ENSG00000090520|ENST00000680338:ORF-42097:198:687	456	489	2	0.0606061

Table 14: hela_DENR_KO_2_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000239672|ENST00000475573:ORF-13829:70:319	228	249	3	0.1428570
ENSG00000145782|ENST00000505993:ORF-16065:13:199	166	186	2	0.1000000
ENSG00000008988|ENST00000676918:ORF-53722:125:485	333	360	2	0.0740741
ENSG00000074800|ENST00000646370:ORF-30141:120:426	182	239	4	0.0701754
ENSG00000105220|ENST00000647446:ORF-38477:45:996	804	883	5	0.0632911

Table 15: Leukemia_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000008988|ENST00000678039:ORF-52312:125:485	333	360	461	17.0741
ENSG00000008988|ENST00000676918:ORF-53722:125:485	333	360	446	16.5185
ENSG00000074800|ENST00000646370:ORF-30141:120:426	182	239	787	13.8070
ENSG00000105220|ENST00000647446:ORF-38477:45:996	804	883	1055	13.3544
ENSG00000140264|ENST00000445816:ORF-11042:122:521	332	399	851	12.7015

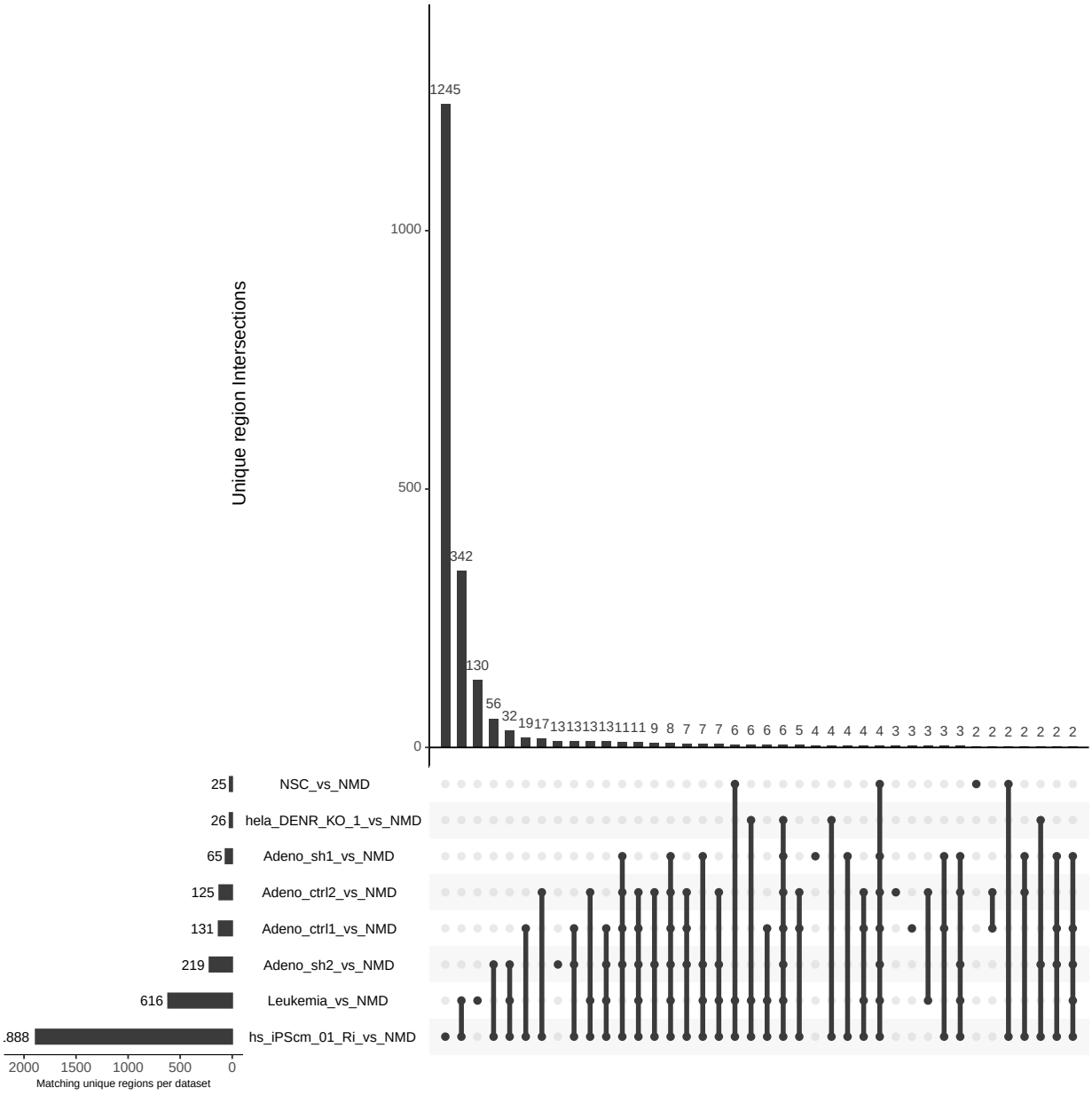
Table 16: LTM_rep1_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000173559|ENST00000307849:ORF-905:479:884	302	405	156	1.5145600
ENSG00000100142|ENST00000483713:ORF-8837:89:320	91	147	2	0.0357143
ENSG00000173660|ENST00000496387:ORF-20524:224:482	0	62	2	0.0322581
ENSG00000204152|ENST00000478381:ORF-8874:146:446	106	204	2	0.0204082
ENSG00000082898|ENST00000428210:ORF-4019:3765:4038	127	273	2	0.0136986

Table 17: LTM_rep2_vs_NMD

ID	start	stop	read_count	relative_count
ENSG00000173559|ENST00000307849:ORF-905:479:884	302	405	131	1.2718400
ENSG00000106211|ENST00000674965:ORF-54625:383:683	21	44	2	0.0869565
ENSG00000161016|ENST00000529920:ORF-17529:541:874	0	57	2	0.0350877
ENSG00000008988|ENST00000676918:ORF-53719:3651:3837	0	88	2	0.0227273
ENSG00000186432|ENST00000676799:ORF-43689:152:323	69	171	2	0.0196078

The following plot shows how many unique regions are expressed in which dataset and how those overlap with the other data sets.



The following shows the number of ORFs validated by Ribo-Seq and mass spectrometry and gives a list of these ORFs accordingly.

Table 18: Number of ORFs validated by Ribo-seq and mass spectrometry

	Overlap
Adeno_ctrl1_vs_NMD	9
Adeno_ctrl2_vs_NMD	8

	Overlap
Adeno_sh1_vs_NMD	5
Adeno_sh2_vs_NMD	10
Harr_vs_NMD	0
hs_iPScm_01_Ri_vs_NMD	53
RiboLace_vs_NMD	0
NSC_vs_NMD	3
hela_WT_vs_NMD	3
hela_DENR_KO_1_vs_NMD	3
hela_DENR_KO_2_vs_NMD	3
Leukemia_vs_NMD	25
LTM_rep1_vs_NMD	0
LTM_rep2_vs_NMD	0

Adeno_ctrl1_vs_NMD
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000138119|ENST00000463743:ORF-12981:110:3533
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000090013|ENST00000597870:ORF-38238:47:512
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000137054|ENST00000442009:ORF-6201:100:526
ENSG00000070087|ENST00000498169:ORF-16750:256:424

Adeno_ctrl2_vs_NMD
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000105755|ENST00000594342:ORF-30245:248:644
ENSG00000090013|ENST00000597870:ORF-38238:47:512
ENSG00000161888|ENST00000423327:ORF-7289:315:738

Adeno_sh1_vs_NMD
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000090013|ENST00000597870:ORF-38238:47:512
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000186010|ENST00000606722:ORF-29918:253:433

Adeno_sh2_vs_NMD
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000090013|ENST00000597870:ORF-38238:47:512
ENSG00000204628|ENST00000504325:ORF-22960:231:1047

Adeno_sh2_vs_NMD
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000161888|ENST00000423327:ORF-7289:315:738
ENSG00000075785|ENST00000490093:ORF-8638:623:848
ENSG00000070087|ENST00000498169:ORF-16750:256:424
ENSG00000018510|ENST00000681032:ORF-42256:881:2123

Harr_vs_NMD
No Overlap

hs_iPScm_01_Ri_vs_NMD
ENSG00000118194|ENST00000663843:ORF-49794:147:315
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000133872|ENST00000518174:ORF-16479:279:1191
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000125821|ENST00000647441:ORF-29606:568:808
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000140416|ENST00000558347:ORF-15384:554:812
ENSG00000075785|ENST00000490093:ORF-8638:623:848
ENSG00000133872|ENST00000520303:ORF-25484:541:1045
ENSG00000161888|ENST00000423327:ORF-7289:315:738
ENSG00000104408|ENST00000676892:ORF-46333:1276:1438
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000189182|ENST00000553168:ORF-18389:29:776
ENSG00000168894|ENST00000443647:ORF-12134:8:245
ENSG00000168894|ENST00000443647:ORF-12134:8:245
ENSG00000104408|ENST00000522445:ORF-17812:318:1377
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000104408|ENST00000678004:ORF-52275:231:1236
ENSG00000140365|ENST00000562610:ORF-25979:365:584
ENSG00000130414|ENST00000678832:ORF-41652:470:1022
ENSG00000130414|ENST00000678832:ORF-41652:470:1022
ENSG00000070087|ENST00000498169:ORF-16750:256:424
ENSG00000138119|ENST00000463743:ORF-12981:110:3533
ENSG00000151348|ENST00000684124:ORF-52568:159:1542
ENSG00000018510|ENST00000680893:ORF-52176:769:2011
ENSG00000171503|ENST00000684552:ORF-47501:4004:4589
ENSG00000171503|ENST00000684296:ORF-48095:1424:2105
ENSG00000151348|ENST00000684124:ORF-52568:159:1542
ENSG00000018510|ENST00000681032:ORF-42256:881:2123
ENSG00000090013|ENST00000597870:ORF-38238:47:512
ENSG00000018510|ENST00000681565:ORF-48662:1200:2166
ENSG00000075151|ENST00000681717:ORF-51581:437:5162
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000018510|ENST00000681752:ORF-42320:548:2159

hs_iPScm_01_Ri_vs_NMD
ENSG00000097021|ENST00000377860:ORF-3601:58:910
ENSG00000132199|ENST00000581475:ORF-28700:565:1354
ENSG00000137054|ENST00000442009:ORF-6201:100:526
ENSG00000129103|ENST00000452216:ORF-13164:154:796
ENSG00000171503|ENST00000684675:ORF-52821:1405:2086
ENSG00000151348|ENST00000684039:ORF-46274:205:1543
ENSG00000105755|ENST00000594342:ORF-30245:248:644
ENSG00000133392|ENST00000652121:ORF-54739:104:2012
ENSG00000147687|ENST00000523214:ORF-19731:628:1048
ENSG00000129103|ENST00000438133:ORF-6570:552:714
ENSG00000129103|ENST00000423763:ORF-6040:604:766
ENSG00000101901|ENST00000489033:ORF-11536:303:567
ENSG00000171503|ENST00000683448:ORF-50984:975:1656
ENSG00000171503|ENST00000683079:ORF-42489:1260:1941
ENSG00000225830|ENST00000679596:ORF-49141:640:3148
ENSG00000099968|ENST00000498133:ORF-18937:196:433
ENSG00000197102|ENST00000684561:ORF-44450:8765:14165

RiboLace_vs_NMD
No Overlap

NSC_vs_NMD
ENSG00000097021|ENST00000377860:ORF-3601:58:910
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000204628|ENST00000504325:ORF-22960:231:1047

hela_WT_vs_NMD
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000186010|ENST00000606722:ORF-29918:253:433

hela_DENR_KO_1_vs_NMD
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000137054|ENST00000442009:ORF-6201:100:526
ENSG00000143549|ENST00000341485:ORF-1634:84:828

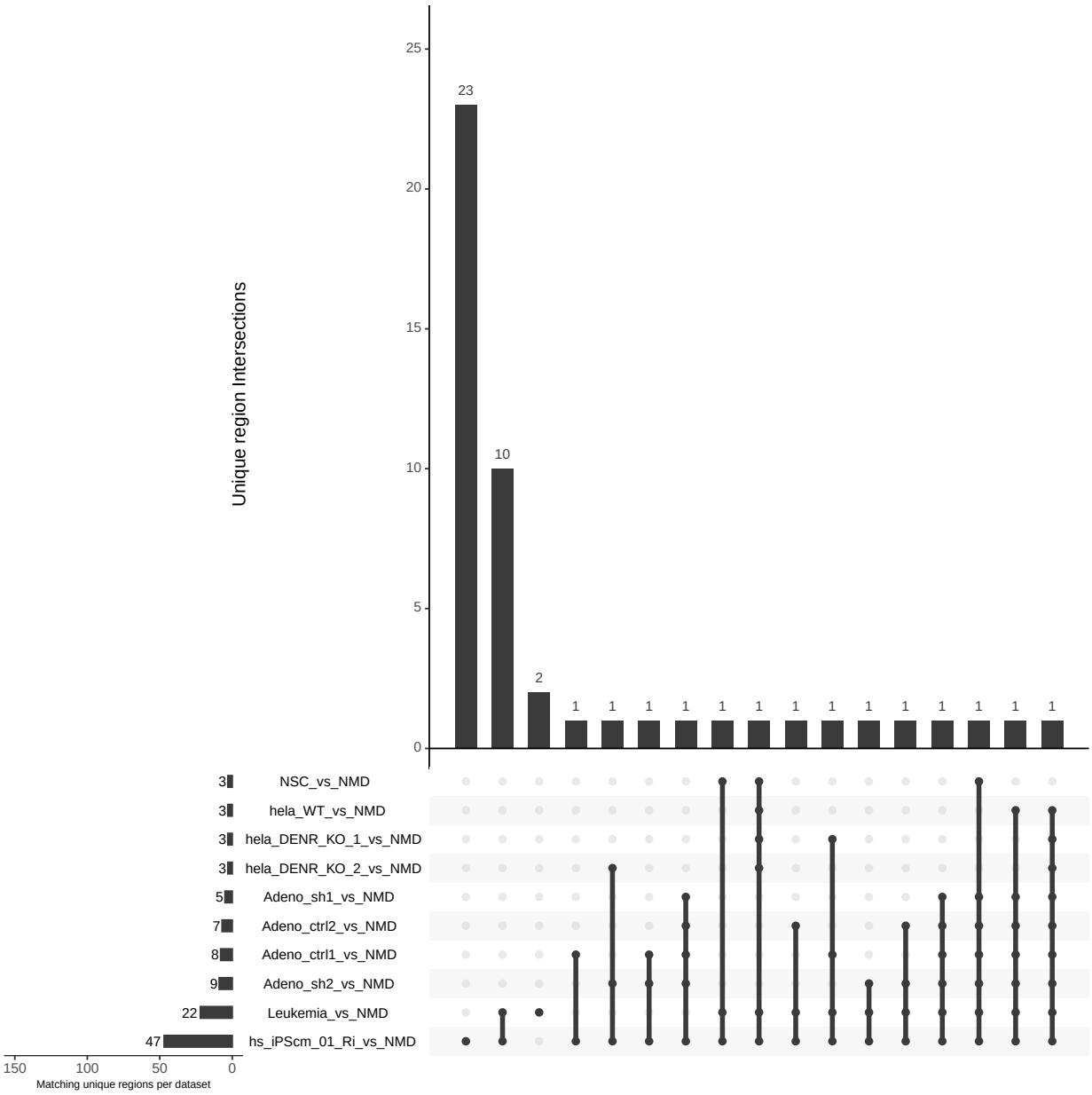
hela_DENR_KO_2_vs_NMD
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000018510|ENST00000681032:ORF-42256:881:2123
ENSG00000143549|ENST00000341485:ORF-1634:84:828

Leukemia_vs_NMD
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000204628|ENST00000508682:ORF-17643:102:546
ENSG00000204628|ENST00000504325:ORF-22960:231:1047
ENSG00000097021|ENST00000377860:ORF-3601:58:910
ENSG00000186010|ENST00000606722:ORF-29918:253:433
ENSG00000204628|ENST00000508682:ORF-17645:862:1168
ENSG00000133872|ENST00000518174:ORF-16479:279:1191
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000104408|ENST00000522445:ORF-17812:318:1377
ENSG00000104408|ENST00000678004:ORF-52275:231:1236
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000133872|ENST00000520303:ORF-25484:541:1045
ENSG00000105755|ENST00000594342:ORF-30245:248:644
ENSG00000140365|ENST00000562610:ORF-25979:365:584
ENSG00000075785|ENST00000490093:ORF-8638:623:848
ENSG00000129103|ENST00000452216:ORF-13164:154:796
ENSG00000125821|ENST00000647441:ORF-29606:568:808
ENSG00000075151|ENST00000681717:ORF-51581:437:5162
ENSG00000151348|ENST00000684124:ORF-52568:159:1542
ENSG00000145907|ENST00000676644:ORF-52261:129:300
ENSG00000143549|ENST00000341485:ORF-1634:84:828
ENSG00000137054|ENST00000442009:ORF-6201:100:526
ENSG00000093217|ENST00000424034:ORF-5586:321:1521
ENSG00000161888|ENST00000423327:ORF-7289:315:738
ENSG00000168894|ENST00000443647:ORF-12134:8:245

LTM_rep1_vs_NMD
No Overlap

LTM_rep2_vs_NMD
No Overlap

The following shows the overlapp between the Ribo-seq and MS validated unique-Regions



Alignment against RI transcripts

The thresholds for each dataset are determined by calculating the average relative read count (number of reads per bp) aligning to randomly selected regions of the 3'UTR-regions of the longest isoforms of all coding transcripts.

Table 33: Thresholds for each dataset

	Threshold
Adeno_ctrl1_vs_RI	0.0000302

	Threshold
Adeno_ctrl2_vs_RI	0.0000339
Adeno_sh1_vs_RI	0.0142627
Adeno_sh2_vs_RI	0.0048344
Harr_vs_RI	0.0165270
hs_iPScm_01_Ri_vs_RI	0.0407032
RiboLace_vs_RI	0.0000190
NSC_vs_RI	0.0000816
hela_WT_vs_RI	0.0000425
hela_DENR_KO_1_vs_RI	0.0000517
hela_DENR_KO_2_vs_RI	0.0000332
Leukemia_vs_RI	0.3192107
LTM_rep1_vs_RI	0.0092162
LTM_rep2_vs_RI	0.0252307

Table 34: Average relative counts of non-unique regions for each dataset

	Average relative count
Adeno_ctrl1_vs_RI	0.0039464
Adeno_ctrl2_vs_RI	0.0042469
Adeno_sh1_vs_RI	0.0024790
Adeno_sh2_vs_RI	0.0072617
Harr_vs_RI	0.0029788
hs_iPScm_01_Ri_vs_RI	0.1246322
RiboLace_vs_RI	0.0003653
NSC_vs_RI	0.0003027
hela_WT_vs_RI	0.0004753
hela_DENR_KO_1_vs_RI	0.0006345
hela_DENR_KO_2_vs_RI	0.0004311
Leukemia_vs_RI	0.2650103
LTM_rep1_vs_RI	0.0014133
LTM_rep2_vs_RI	0.0005930

Table 35: Regions above the threshold

	Number of unique regions with relative count >= Threshold
Adeno_ctrl1_vs_RI	281
Adeno_ctrl2_vs_RI	261
Adeno_sh1_vs_RI	115
Adeno_sh2_vs_RI	423
Harr_vs_RI	23
hs_iPScm_01_Ri_vs_RI	2174
RiboLace_vs_RI	1
NSC_vs_RI	31
hela_WT_vs_RI	48
hela_DENR_KO_1_vs_RI	62
hela_DENR_KO_2_vs_RI	46
Leukemia_vs_RI	725
LTM_rep1_vs_RI	27

	Number of unique regions with relative count >= Threshold
LTM_rep2_vs_RI	20

The following table shows the top five unique regions with a relative count above the threshold (if available).

Table 36: Adeno_ctrl1_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	102	1.500000
ENSG00000111640|ENST00000466525:ORF-10266:293:566	0	113	153	1.353980
ENSG00000111640|ENST00000466525:ORF-10267:845:1553	32	224	253	1.317710
ENSG00000120708|ENST00000506699:ORF-31150:942:1227	250	285	38	1.085710
ENSG00000184009|ENST00000574671:ORF-63181:124:565	363	441	73	0.935897

Table 37: Adeno_ctrl2_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	84	1.235290
ENSG00000111640|ENST00000466525:ORF-10267:845:1553	32	224	233	1.213540
ENSG00000111640|ENST00000466525:ORF-10266:293:566	0	113	136	1.203540
ENSG00000120708|ENST00000506699:ORF-31150:942:1227	250	285	28	0.800000
ENSG00000075415|ENST00000546766:ORF-23596:90:459	157	369	164	0.773585

Table 38: Adeno_sh1_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000198467|ENST00000471212:ORF-6420:751:1108	304	357	30	0.566038
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	34	0.500000
ENSG00000184009|ENST00000679410:ORF-69946:124:985	805	861	26	0.464286
ENSG00000111640|ENST00000466525:ORF-10266:293:566	0	113	48	0.424779
ENSG00000111640|ENST00000466525:ORF-10267:845:1553	32	224	76	0.395833

Table 39: Adeno_sh2_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000111640|ENST00000466525:ORF-10266:293:566	0	113	249	2.20354
ENSG00000111640|ENST00000466525:ORF-10267:845:1553	32	224	391	2.03646
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	138	2.02941
ENSG00000120708|ENST00000506699:ORF-31150:942:1227	250	285	42	1.20000
ENSG00000198467|ENST00000471212:ORF-6420:751:1108	304	357	63	1.18868

Table 40: Harr_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000120071|ENST00000573286:ORF-45408:3957:4422	267	465	762	3.848480
ENSG00000172890|ENST00000531236:ORF-29688:2626:3286	605	660	59	1.072730
ENSG00000172932|ENST00000512231:ORF-42800:1162:1417	31	255	216	0.964286
ENSG00000172932|ENST00000513750:ORF-36950:1162:1417	31	255	198	0.883929
ENSG00000135931|ENST00000684224:ORF-71885:2606:2885	0	26	21	0.807692

Table 41: hs_iPScm_01_Ri_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000140416|ENST00000560975:ORF-40989:146:437	114	291	6039	34.1186
ENSG00000173641|ENST00000442459:ORF-2737:80:287	82	109	917	33.9630
ENSG00000075624|ENST00000462494:ORF-4711:84:642	363	558	6370	32.6667
ENSG00000149925|ENST00000564521:ORF-24202:93:480	327	387	1893	31.5500
ENSG00000092841|ENST00000548725:ORF-31381:294:570	95	186	1732	19.0330

Table 42: RiboLace_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000112146|ENST00000474457:ORF-11252:1190:1832	562	642	2	0.025

Table 43: NSC_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000166794|ENST00000561048:ORF-39762:33:417	344	384	12	0.3000000
ENSG00000115053|ENST00000676798:ORF-57490:1994:2771	746	777	4	0.1290320
ENSG00000135486|ENST00000679228:ORF-71241:59:272	136	213	7	0.0909091
ENSG00000196365|ENST00000587552:ORF-52719:388:1291	828	903	5	0.0666667
ENSG00000164080|ENST00000487093:ORF-15847:125:1496	1339	1371	2	0.0625000

Table 44: hela_WT_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000144381|ENST00000461097:ORF-2906:38:515	429	477	7	0.1458330
ENSG00000143549|ENST00000469717:ORF-9873:92:353	0	66	6	0.0909091
ENSG00000112306|ENST00000484616:ORF-12666:82:316	132	234	9	0.0882353
ENSG00000144381|ENST00000476746:ORF-13011:1209:1404	40	195	13	0.0838710
ENSG00000144381|ENST00000461097:ORF-2907:2909:3104	40	195	12	0.0774194

Table 45: hela_DENR_KO_1_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	9	0.1323530
ENSG00000109971|ENST00000532091:ORF-41314:1319:1574	179	255	9	0.1184210
ENSG00000108298|ENST00000577741:ORF-62424:28:295	240	267	3	0.1111110
ENSG00000112306|ENST00000484616:ORF-12666:82:316	132	234	10	0.0980392
ENSG00000063177|ENST00000552347:ORF-25822:643:952	0	65	5	0.0769231

Table 46: hela_DENR_KO_2_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000144381|ENST00000461097:ORF-2906:38:515	429	477	6	0.1250000
ENSG00000111640|ENST00000466525:ORF-10266:293:566	205	273	6	0.0882353
ENSG00000144381|ENST00000461097:ORF-2907:2909:3104	40	195	11	0.0709677
ENSG00000112306|ENST00000484616:ORF-12666:82:316	132	234	7	0.0686275
ENSG00000129351|ENST00000587928:ORF-63293:1924:3058	1086	1134	3	0.0625000

Table 47: Leukemia_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000142534|ENST00000600027:ORF-45572:92:410	224	318	4103	43.6489
ENSG00000112306|ENST00000484616:ORF-12666:82:316	132	234	2260	22.1569
ENSG00000108107|ENST00000426763:ORF-2034:1529:1736	39	207	2985	17.7679
ENSG00000111640|ENST00000466525:ORF-10267:845:1553	32	224	2576	13.4167
ENSG00000156508|ENST00000488500:ORF-22269:62:710	621	648	354	13.1111

Table 48: LTM_rep1_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000120071|ENST00000573286:ORF-45408:3957:4422	267	465	1148	5.797980
ENSG00000105819|ENST00000469560:ORF-5794:1066:1249	87	163	89	1.171050
ENSG00000172932|ENST00000512231:ORF-42800:1162:1417	31	255	218	0.973214
ENSG00000172932|ENST00000513750:ORF-36950:1162:1417	31	255	202	0.901786
ENSG00000172890|ENST00000531236:ORF-29688:2626:3286	605	660	47	0.854545

Table 49: LTM_rep2_vs_RI

ID	start	stop	read_count	relative_count
ENSG00000120071|ENST00000573286:ORF-45408:3957:4422	267	465	583	2.944440
ENSG00000172932|ENST00000512231:ORF-42800:1162:1417	31	255	189	0.843750
ENSG00000172932|ENST00000513750:ORF-36950:1162:1417	31	255	186	0.830357
ENSG00000105819|ENST00000469560:ORF-5794:1066:1249	87	163	54	0.710526
ENSG00000172890|ENST00000531236:ORF-29688:2626:3286	605	660	30	0.545455

The following plot shows how many unique regions are expressed in which dataset and how those overlap with the other data sets.