Supplementary Figure Legends

Figure S1. Effects of *M. bovis* BCG infection and IFNγ stimulation on nascent and cellular poly-A+ RNA for STAT1 and IRF1. THP-1 cells were differentiated, infected with *M. bovis* BCG (as described for *M. tb*) and/or stimulated with IFNγ, and then nascent transcripts were measured using the nuclear run-on assay, or cellular RNA was extracted and poly-A+ transcripts were quantified by qRT-PCR. The ratio of the fold-change in the abundance of the poly-A+ RNA relative to the fold-change in the level of nascent transcripts is shown for one of two independent experiments that gave similar results.

Figure S2. Effects of *M. tuberculosis* infection and IFNγ stimulation on total and poly-A+ nuclear RNA for STAT1 and IRF1. THP-1 cells were differentiated, infected with *M. tb* and/or stimulated with IFNγ, and then total nuclear RNA was extracted and quantified by qRT-PCR using random nonamer or oligo-dT(15) primers for reverse transcription. The ratio of the fold-change in the level of poly-A+ nuclear RNA relative to the fold-change in the level of total nuclear RNA is shown for the averages of each from 4-6 replicate experiments.

Figure S3. Effects of *M. tuberculosis* infection and IFNγ stimulation on STAT1 and IRF1 transcript half-life. THP-1 cells were infected with *M. tuberculosis* and/or stimulated with IFNγ, and then treated with actinomycin D for various times. Cellular RNA was extracted and assayed for poly-A+ STAT1 and IRF1 transcripts. The half-life of each was calculated. The averages and standard deviations from three or four replicate experiments are shown.

Figure S4. Post-initiation mRNA biogenesis Reactome pathways are down-regulated by *M. tuberculosis* infection. Eighteen pathways were tested. The pathways shown are significantly different for the indicated comparisons (**A**-**G**) based on a false discovery rate (FDR) criterion of 0.05 for the CERNO test results. The pathway tests were based on the rank order of differential expression for all genes in a pathway (among all transcript measurements of all named genes targeted by the gene expression platform). The top matrix depicts the membership of genes (columns) in pathways (rows) with red squares. The rows and columns of the top matrix are sorted to bring together similar pathway membership patterns. Genes shown are members of one or more pathways that exhibited differential expression for the indicated comparison (one-sided Student's T-test to assess down-regulation, $p < 0.05$ unless otherwise noted). The lower matrix is a heatmap of expression for each of the significantly regulated genes in each of the samples that were compared. The heatmap shows gradations from higher to lower expression as yellow to blue. Gene symbols are shown with the NCBI Gene IDs and the probe (or probe set) identifiers that measured significant differential expression. *M. tuberculosis* is associated with significance for various of the tested pathways as follows: **A**) 16 pathways were down-regulated when comparing *M. tuberculosis*-infected THP-1 cells to uninfected cells; **B**) 17 pathways were down-regulated when THP-1 cells infected with *M. tuberculosis* and stimulated with IFNγ were compared to uninfected, IFN-γ-stimulated THP-1 cells; **C**) four pathways were down-regulated when comparing blood from PTB donors to blood from LTBI donors from London; **D**) eight pathways were down-regulated when comparing blood from PTB donors to blood from LTBI donors from The Gambia (genes shown for t-test p-value < 0.001); **E**) seven pathways were down-regulated when comparing infected (pretreatment) patients to patients after two months of treatment (based on the results of one-sided paired T-tests for increase in expression associated

with treatment); **F**) 15 pathways were down-regulated when comparing infected (pretreatment) patients to patients after twelve months of treatment (based on the results of one-sided paired T-tests for increase in expression associated with treatment); and **G**) 10 pathways were down-regulated when comparing monocyte-derived macrophages (MDM) from LTBI patients to MDM from cured PTB patients.

Figure S1

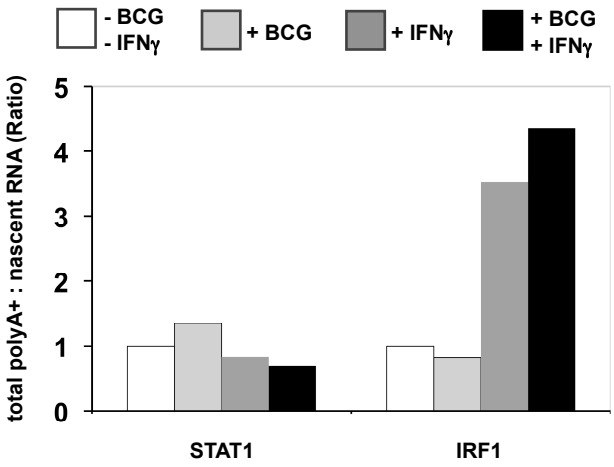

- BCG
- IFNγ
+ BCG
+ IFNγ
+ BCG
+ IFNγ
total polyA+ : nascent RNA (Ratio)
0
1
2
3
4
5
STAT1
IRF1

Figure S2

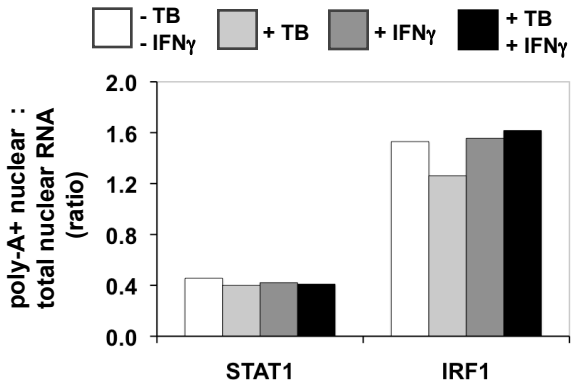

- TB
- IFNγ
+ TB
+ IFNγ
+ TB
+ IFNγ
poly-A+ nuclear : total nuclear RNA (ratio)
2.0
1.6
1.2
0.8
0.4
0.0
STAT1
IRF1

Figure S3

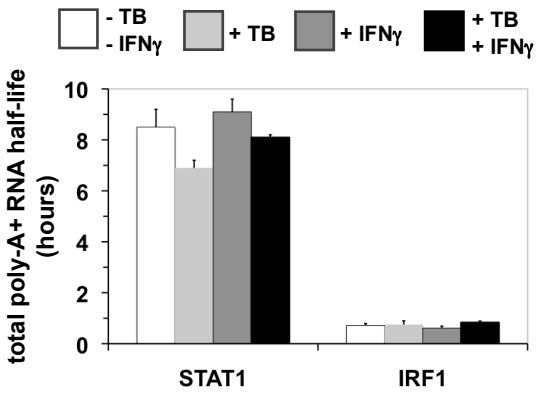
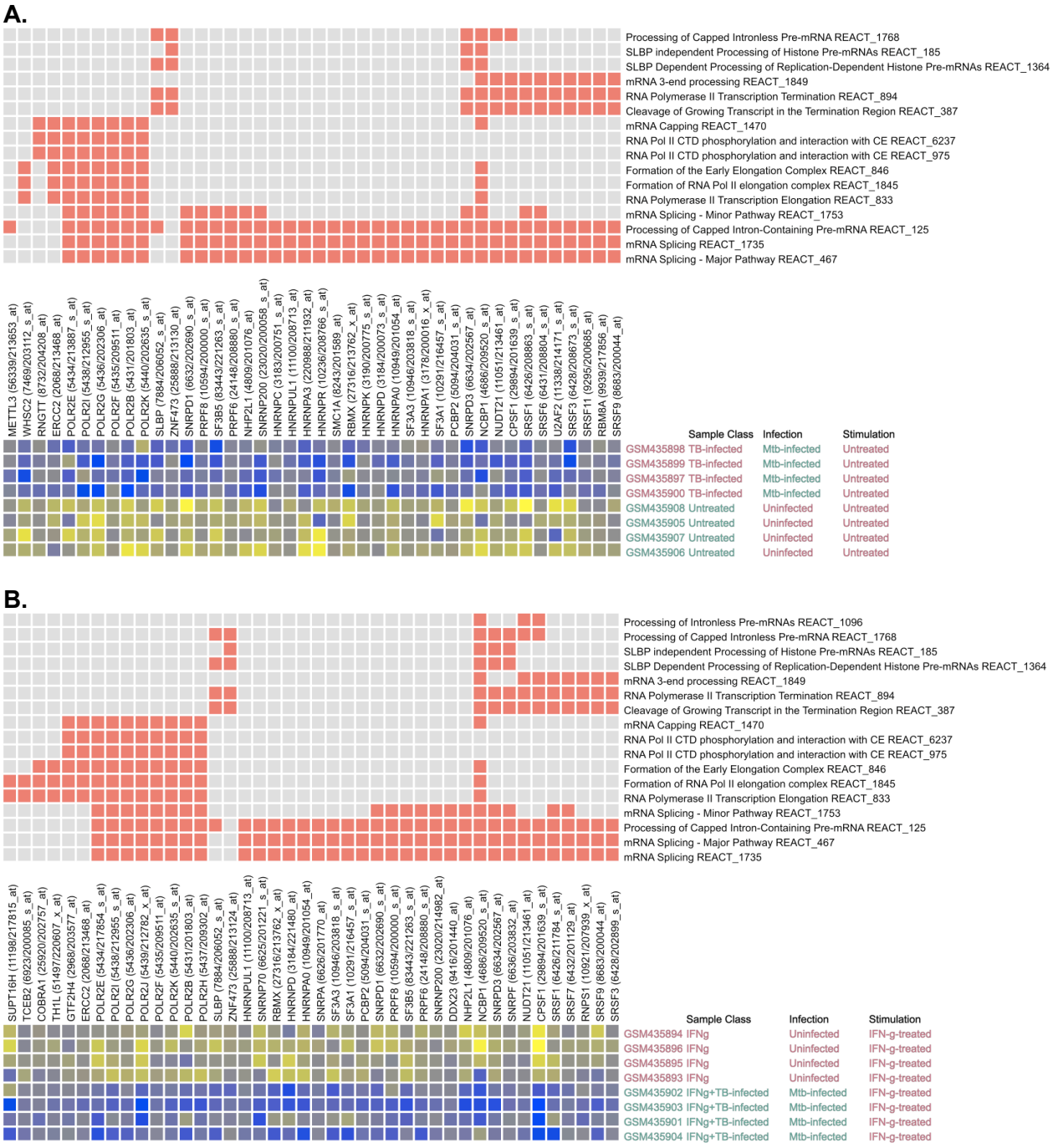
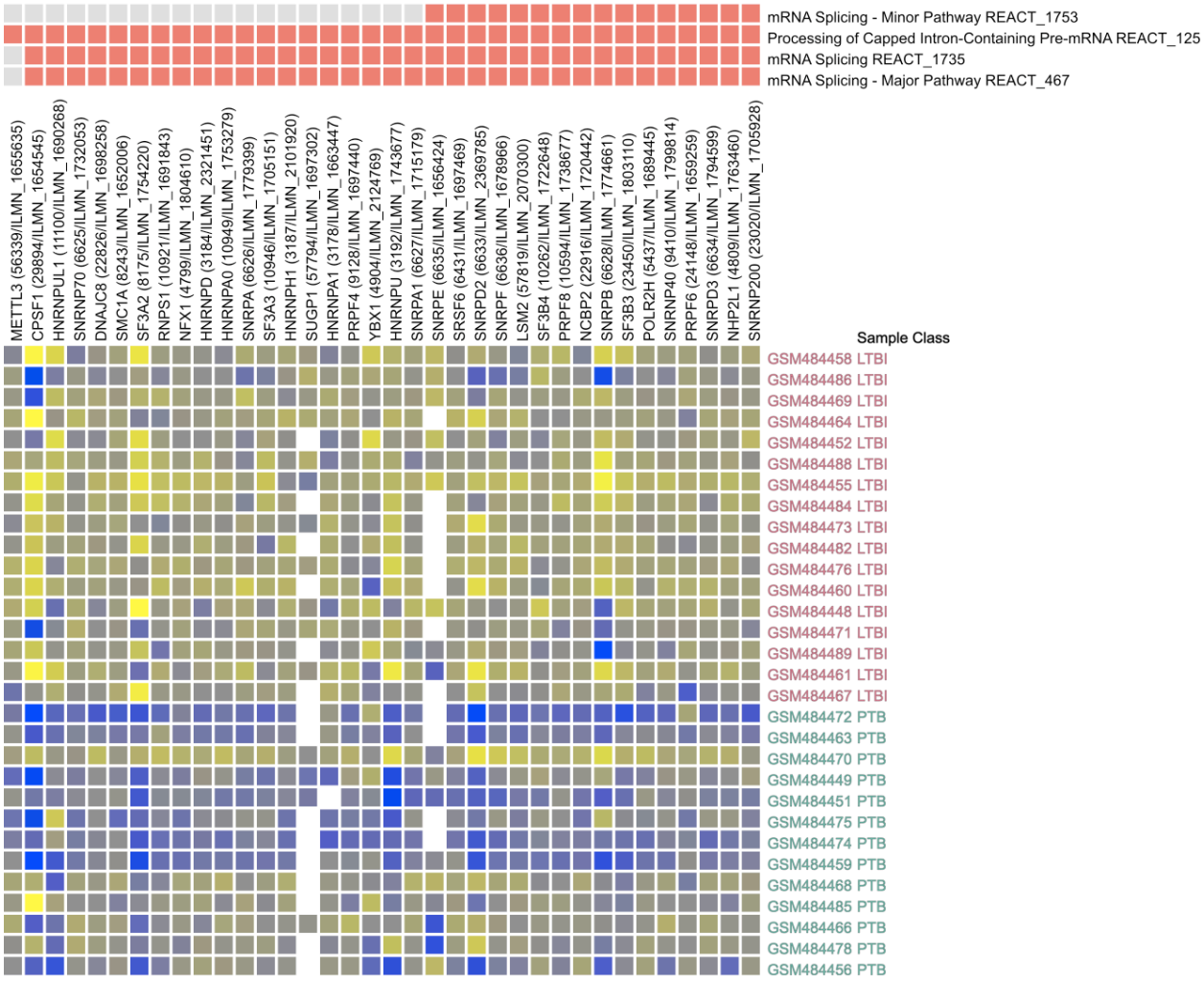

- TB
- IFNγ
+ TB
+ IFNγ
+ TB
+ IFNγ
total poly-A+ RNA half-life (hours)
10
8
6
4
2
0
STAT1
IRF1

Figure S4


A.
Processing of Capped Intronless Pre-mRNA REACT_1768
SLBP independent Processing of Histone Pre-mRNAs REACT_185
SLBP Dependent Processing of Replication-Dependent Histone Pre-mRNAs REACT_1364
mRNA 3-end processing REACT_1849
RNA Polymerase II Transcription Termination REACT_894
Cleavage of Growing Transcript in the Termination Region REACT_387
mRNA Capping REACT_1470
RNA Pol II CTD phosphorylation and interaction with CE REACT_6237
RNA Pol II CTD phosphorylation and interaction with CE REACT_975
Formation of the Early Elongation Complex REACT_846
Formation of RNA Pol II elongation complex REACT_1845
RNA Polymerase II Transcription Elongation REACT_833
mRNA Splicing - Minor Pathway REACT_1753
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing REACT_1735
mRNA Splicing - Major Pathway REACT_467
METTL3 (56339/213653_at)
WHSC2 (7469/203112_s_at)
RNGTT (8732/204208_at)
ERCC2 (2068/213468_at)
POLR2E (5434/213887_s_at)
POLR2I (5438/212955_s_at)
POLR2G (5436/202306_at)
POLR2F (5435/209511_at)
POLR2B (5431/201803_at)
POLR2K (5440/202635_s_at)
SLBP (7884/206052_s_at)
ZNF473 (25888/213130_at)
SNRPD1 (6632/202690_s_at)
PRPF8 (10594/200000_s_at)
SF3B5 (83443/221263_s_at)
PRPF6 (24148/208880_s_at)
NHP2L1 (4809/201076_at)
SNRNP200 (23020/200058_s_at)
HNRNPC (3183/200751_s_at)
HNRNPUL1 (11100/208713_at)
HNRNPA3 (220988/211932_at)
HNRNPR (10236/208766_s_at)
SMC1A (8243/201589_at)
RBMX (27316/213762_x_at)
HNRNPK (3190/200775_s_at)
HNRNPD (3184/200073_s_at)
HNRNPA0 (10949/201054_at)
SF3A3 (10946/203818_s_at)
HNRNPA1 (3178/200016_x_at)
SF3A1 (10291/216457_s_at)
PCBP2 (5094/204031_s_at)
SNRPD3 (6634/202567_at)
NCBP1 (4686/209520_s_at)
NUDT21 (11051/213461_at)
CPSF1 (29894/201639_s_at)
SRSF1 (6426/208863_s_at)
SRSF6 (6431/208804_s_at)
U2AF2 (11338/214171_s_at)
SRSF3 (6428/208673_s_at)
SRSF11 (9295/200685_at)
RBM8A (9939/217856_at)
SRSF9 (8683/200044_at)
Sample Class
Infection
Stimulation
GSM435898 TB-infected
Mtb-infected
Untreated
GSM435899 TB-infected
Mtb-infected
Untreated
GSM435897 TB-infected
Mtb-infected
Untreated
GSM435900 TB-infected
Mtb-infected
Untreated
GSM435908 Untreated
Uninfected
Untreated
GSM435905 Untreated
Uninfected
Untreated
GSM435907 Untreated
Uninfected
Untreated
GSM435906 Untreated
Uninfected
Untreated
B.
Processing of Intronless Pre-mRNAs REACT_1096
Processing of Capped Intronless Pre-mRNA REACT_1768
SLBP independent Processing of Histone Pre-mRNAs REACT_185
SLBP Dependent Processing of Replication-Dependent Histone Pre-mRNAs REACT_1364
mRNA 3-end processing REACT_1849
RNA Polymerase II Transcription Termination REACT_894
Cleavage of Growing Transcript in the Termination Region REACT_387
mRNA Capping REACT_1470
RNA Pol II CTD phosphorylation and interaction with CE REACT_6237
RNA Pol II CTD phosphorylation and interaction with CE REACT_975
Formation of the Early Elongation Complex REACT_846
Formation of RNA Pol II elongation complex REACT_1845
RNA Polymerase II Transcription Elongation REACT_833
mRNA Splicing - Minor Pathway REACT_1753
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing - Major Pathway REACT_467
mRNA Splicing REACT_1735
SUPT16H (11198/217815_at)
TCEB2 (6923/200085_s_at)
COBRA1 (25920/202757_at)
TH1L (51497/220607_x_at)
GTF2H4 (2968/203577_at)
ERCC2 (2068/213468_at)
POLR2E (5434/217854_s_at)
POLR2I (5438/212955_s_at)
POLR2G (5436/202306_at)
POLR2J (5439/212782_x_at)
POLR2F (5435/209511_at)
POLR2K (5440/202635_s_at)
POLR2B (5431/201803_at)
POLR2H (5437/209302_at)
SLBP (7884/206052_s_at)
ZNF473 (25888/213124_at)
HNRNPUL1 (11100/208713_at)
SNRNP70 (6625/201221_s_at)
RBMX (27316/213762_x_at)
HNRNPD (3184/221480_at)
HNRNPA0 (10949/201054_at)
SNRPA (6626/201770_at)
SF3A3 (10946/203818_s_at)
SF3A1 (10291/216457_s_at)
PCBP2 (5094/204031_s_at)
SNRPD1 (6632/202690_s_at)
PRPF8 (10594/200000_s_at)
SF3B5 (83443/221263_s_at)
PRPF6 (24148/208880_s_at)
SNRNP200 (23020/214982_at)
DDX23 (9416/201440_at)
NHP2L1 (4809/201076_at)
NCBP1 (4686/209520_s_at)
SNRPD3 (6634/202567_at)
SNRPF (6636/203832_at)
NUDT21 (11051/213461_at)
CPSF1 (29894/201639_s_at)
SRSF1 (6426/211784_s_at)
SRSF7 (6432/201129_at)
RNPS1 (10921/207939_x_at)
SRSF9 (8683/200044_at)
SRSF3 (6428/202899_s_at)
Sample Class
Infection
Stimulation
GSM435894 IFNg
Uninfected
IFN-g-treated
GSM435896 IFNg
Uninfected
IFN-g-treated
GSM435895 IFNg
Uninfected
IFN-g-treated
GSM435893 IFNg
Uninfected
IFN-g-treated
GSM435902 IFNg+TB-infected
Mtb-infected
IFN-g-treated
GSM435903 IFNg+TB-infected
Mtb-infected
IFN-g-treated
GSM435901 IFNg+TB-infected
Mtb-infected
IFN-g-treated
GSM435904 IFNg+TB-infected
Mtb-infected
IFN-g-treated

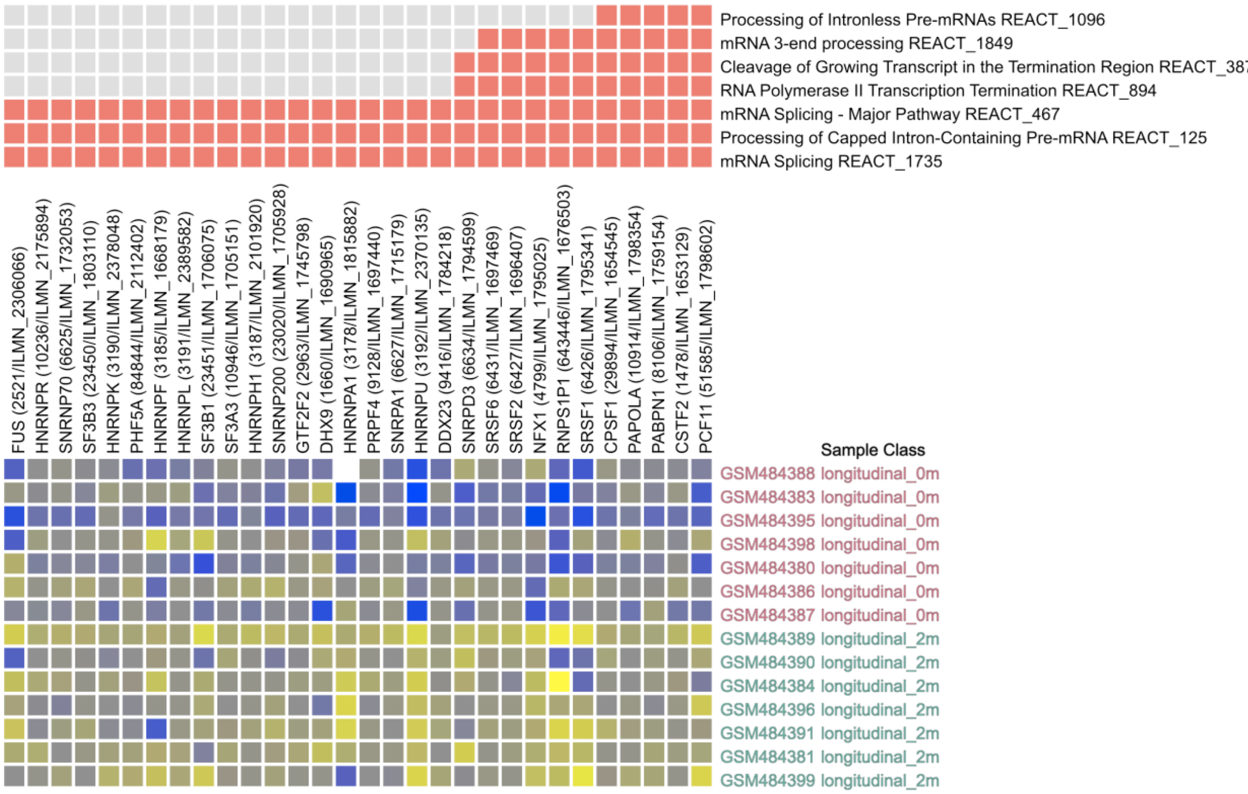
C.


mRNA Splicing - Minor Pathway REACT_1753
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing REACT_1735
mRNA Splicing - Major Pathway REACT_467
METTL3 (56339/ILMN_1655635)
CPSF1 (29894/ILMN_1654545)
HNRNPUL1 (11100/ILMN_1690268)
SNRNP70 (6625/ILMN_1732053)
DNAJC8 (22826/ILMN_1698258)
SMC1A (8243/ILMN_1652006)
SF3A2 (8175/ILMN_1754220)
RNPS1 (10921/ILMN_1691843)
NFX1 (4799/ILMN_1804610)
HNRNPD (3184/ILMN_2321451)
HNRNPA0 (10949/ILMN_1753279)
SNRPA (6626/ILMN_1779399)
SF3A3 (10946/ILMN_1705151)
HNRNPH1 (3187/ILMN_2101920)
SUGP1 (57794/ILMN_1697302)
HNRNPA1 (3178/ILMN_1663447)
PRPF4 (9128/ILMN_1697440)
YBX1 (4904/ILMN_2124769)
HNRNPU (3192/ILMN_1743677)
SNRPA1 (6627/ILMN_1715179)
SNRPE (6635/ILMN_1656424)
SRSF6 (6431/ILMN_1697469)
SNRPD2 (6633/ILMN_2369785)
SNRPF (6636/ILMN_1678966)
LSM2 (57819/ILMN_2070300)
SF3B4 (10262/ILMN_1722648)
PRPF8 (10594/ILMN_1738677)
NCBP2 (22916/ILMN_1720442)
SNRPB (6628/ILMN_1774661)
SF3B3 (23450/ILMN_1803110)
POLR2H (5437/ILMN_1689445)
SNRNP40 (9410/ILMN_1799814)
PRPF6 (24148/ILMN_1659259)
SNRPD3 (6634/ILMN_1794599)
NHP2L1 (4809/ILMN_1763460)
SNRNP200 (23020/ILMN_1705928)
Sample Class
GSM484458 LTBI
GSM484486 LTBI
GSM484469 LTBI
GSM484464 LTBI
GSM484452 LTBI
GSM484488 LTBI
GSM484455 LTBI
GSM484484 LTBI
GSM484473 LTBI
GSM484482 LTBI
GSM484476 LTBI
GSM484460 LTBI
GSM484448 LTBI
GSM484471 LTBI
GSM484489 LTBI
GSM484461 LTBI
GSM484467 LTBI
GSM484472 PTB
GSM484463 PTB
GSM484470 PTB
GSM484449 PTB
GSM484451 PTB
GSM484475 PTB
GSM484474 PTB
GSM484459 PTB
GSM484468 PTB
GSM484485 PTB
GSM484466 PTB
GSM484478 PTB
GSM484456 PTB

D.

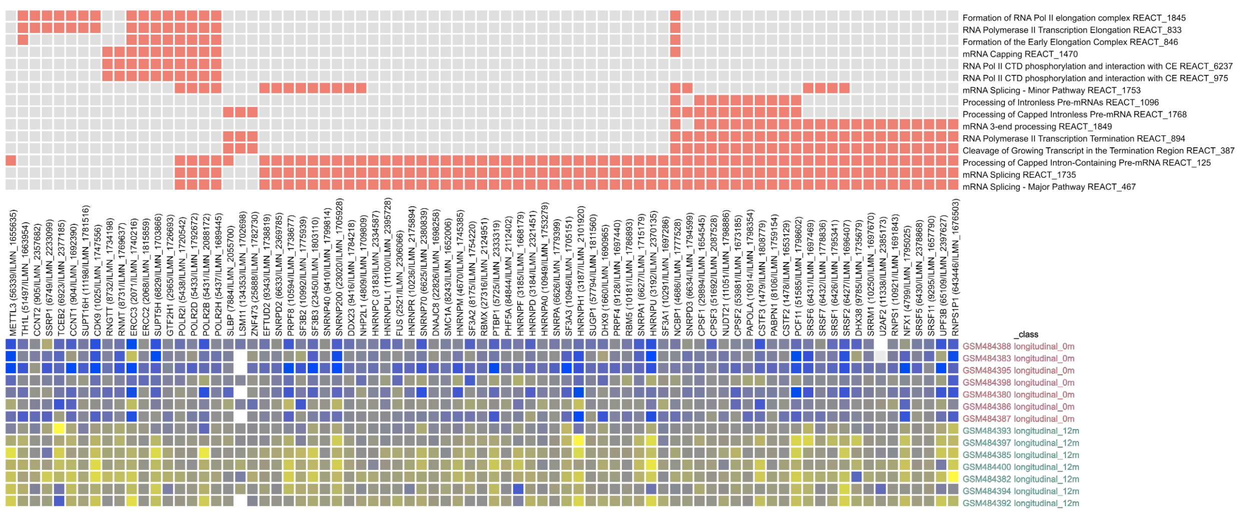

Formation of RNA Pol II elongation complex REACT_1845
RNA Polymerase II Transcription Elongation REACT_833
Cleavage of Growing Transcript in the Termination Region REACT_387
RNA Polymerase II Transcription Termination REACT_894
mRNA Splicing - Minor Pathway REACT_1753
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing REACT_1735
mRNA Splicing - Major Pathway REACT_467
METTL3 (56339/9995)
COBRA1 (25920/5119)
ERCC2 (2068/22019)
CDK9 (1025/5211)
SUPT16H (11198/17678)
TH1L (51497/34821)
GTF2H4 (2968/36697)
SSRP1 (6749/5086)
WHSC2 (7469/2271)
TCEB3 (6924/6655)
ERCC3 (2071/39391)
GTF2F1 (2962/22204)
POLR2G (5436/20789)
POLR2I (5438/18289)
SNRPB (6628/6287)
SNRPD3 (6634/41742)
SNRPF (6636/36313)
PABPN1 (8106/11696)
UPF3B (65109/29027)
RBM8A (9939/11653)
ALYREF (10189/8863)
NFX1 (4799/1490)
CPSF1 (29894/37008)
SRRM1 (10250/21373)
U2AF1 (7307/645)
CSTF1 (1477/18870)
SRSF5 (6430/2772)
RNPS1 (10921/3331)
CSTF2 (1478/16974)
PRPF8 (10594/9759)
NHP2L1 (4809/38565)
EFTUD2 (9943/21882)
SF3B2 (1092/19796)
SF3B3 (23450/34572)
SNRNP40 (9410/23325)
LSM2 (57819/30371)
SNRNP200 (23020/37723)
PRPF6 (24148/32176)
HNRNPU (3192/588)
SNRPA1 (6627/27117)
PCBP2 (5094/34088)
CD2BP2 (10421/12451)
RBMX (2731/6/40610)
HNRNPUL1 (11100/13569)
HNRNPA3 (220988/15461)
HNRNPL (3191/18385)
FUS (2521/19517)
SNRNP70 (6625/34334)
HNRNPD (3184/15302)
DNAJC8 (22826/32114)
HNRNPA0 (10949/14885)
SNRPA (6626/4441)
SF3A3 (10946/41547)
SMC1A (8243/17983)
HNRNPH1 (3187/30695)
HNRNPM (4670/10931)
PRPF4 (9128/21941)
HNRNPA1 (3178/10209)
Sample Class
GSM709517 LTBI
GSM709494 LTBI
GSM709456 LTBI
GSM709497 LTBI
GSM709418 LTBI
GSM709414 LTBI
GSM709486 LTBI
GSM709457 LTBI
GSM709468 LTBI
GSM709519 LTBI
GSM709495 LTBI
GSM709429 LTBI
GSM709415 LTBI
GSM709435 LTBI
GSM709440 LTBI
GSM709441 LTBI
GSM709433 LTBI
GSM709425 LTBI
GSM709518 LTBI
GSM709492 LTBI
GSM709446 LTBI
GSM709445 LTBI
GSM709465 LTBI
GSM709419 LTBI
GSM709484 LTBI
GSM709467 PTB
GSM709473 PTB
GSM709489 PTB
GSM709439 PTB
GSM709466 PTB
GSM709417 PTB
GSM709475 PTB
GSM709455 PTB
GSM709421 PTB
GSM709485 PTB
GSM709474 PTB
GSM709505 PTB
GSM709502 PTB
GSM709452 PTB
GSM709459 PTB
GSM709479 PTB
GSM709501 PTB
GSM709488 PTB
GSM709461 PTB
GSM709450 PTB
GSM709427 PTB
GSM709431 PTB
GSM709434 PTB
GSM709426 PTB
GSM709490 PTB
GSM709507 PTB
GSM709483 PTB
GSM709482 PTB
GSM709510 PTB
GSM709487 PTB
GSM709508 PTB
GSM709458 PTB
GSM709449 PTB
GSM709469 PTB
GSM709422 PTB
GSM709424 PTB
GSM709447 PTB
GSM709464 PTB
GSM709471 PTB
GSM709472 PTB
GSM709503 PTB
GSM709436 PTB
GSM709454 PTB
GSM709506 PTB
GSM709504 PTB
GSM709470 PTB

E.

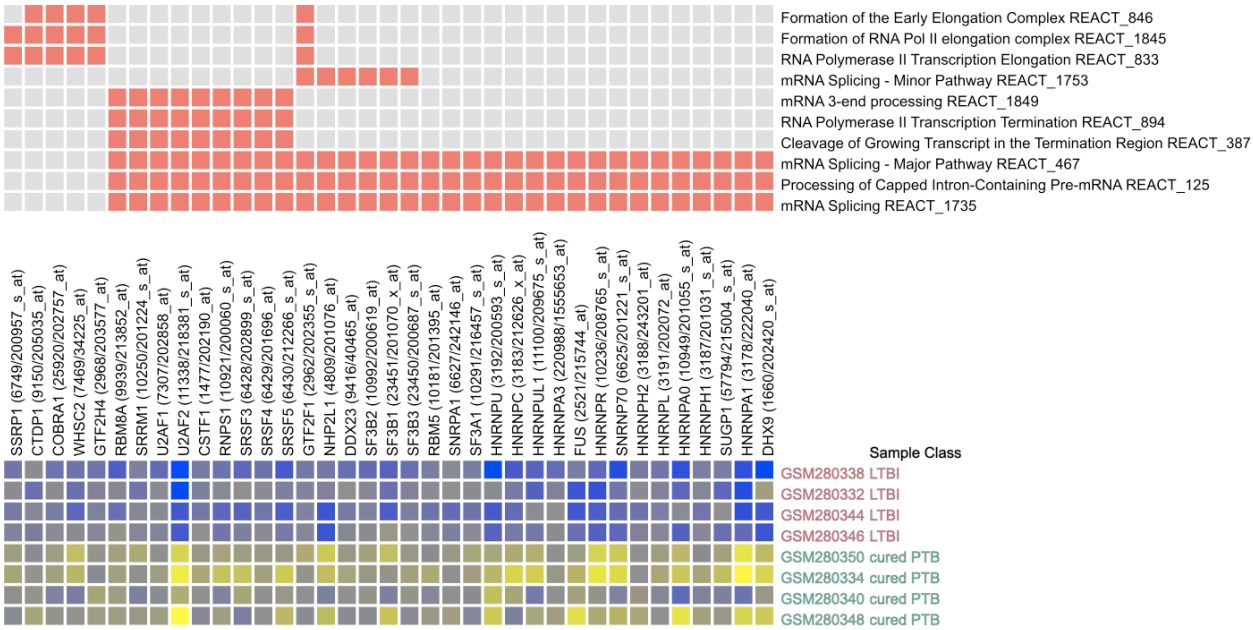


Processing of Intronless Pre-mRNAs REACT_1096
mRNA 3-end processing REACT_1849
Cleavage of Growing Transcript in the Termination Region REACT_387
RNA Polymerase II Transcription Termination REACT_894
mRNA Splicing - Major Pathway REACT_467
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing REACT_1735
FUS (2521/ILMN_2306066)
HNRNPR (10236/ILMN_2175894)
SNRNP70 (6625/ILMN_1732053)
SF3B3 (23450/ILMN_1803110)
HNRNPK (3190/ILMN_2378048)
PHF5A (84844/ILMN_2112402)
HNRNPF (3185/ILMN_1668179)
HNRNPL (3191/ILMN_2389582)
SF3B1 (23451/ILMN_1706075)
SF3A3 (10946/ILMN_1705151)
HNRNPH1 (3187/ILMN_2101920)
SNRNP200 (23020/ILMN_1705928)
GTF2F2 (2963/ILMN_1745798)
DHX9 (1660/ILMN_1690965)
HNRNPA1 (3178/ILMN_1815882)
PRPF4 (9128/ILMN_1697440)
SNRPA1 (6627/ILMN_1715179)
HNRNPU (3192/ILMN_2370135)
DDX23 (9416/ILMN_1784218)
SNRPD3 (6634/ILMN_1794599)
SRSF6 (6431/ILMN_1697469)
SRSF2 (6427/ILMN_1696407)
NFX1 (4799/ILMN_1795025)
RNPS1P1 (643446/ILMN_1676503)
SRSF1 (6426/ILMN_1795341)
CPSF1 (29894/ILMN_1654545)
PAPOLA (10914/ILMN_1798354)
PABPN1 (8106/ILMN_1759154)
CSTF2 (1478/ILMN_1653129)
PCF11 (51585/ILMN_1798602)
Sample Class
GSM484388 longitudinal_0m
GSM484383 longitudinal_0m
GSM484395 longitudinal_0m
GSM484398 longitudinal_0m
GSM484380 longitudinal_0m
GSM484386 longitudinal_0m
GSM484387 longitudinal_0m
GSM484389 longitudinal_2m
GSM484390 longitudinal_2m
GSM484384 longitudinal_2m
GSM484396 longitudinal_2m
GSM484391 longitudinal_2m
GSM484381 longitudinal_2m
GSM484399 longitudinal_2m

F.



G


Formation of the Early Elongation Complex REACT_846
Formation of RNA Pol II elongation complex REACT_1845
RNA Polymerase II Transcription Elongation REACT_833
mRNA Splicing - Minor Pathway REACT_1753
mRNA 3-end processing REACT_1849
RNA Polymerase II Transcription Termination REACT_894
Cleavage of Growing Transcript in the Termination Region REACT_387
mRNA Splicing - Major Pathway REACT_467
Processing of Capped Intron-Containing Pre-mRNA REACT_125
mRNA Splicing REACT_1735
SSRP1 (6749/200957_s_at)
CTDP1 (9150/205035_at)
COBRA1 (25920/202757_at)
WHSC2 (7469/34225_at)
GTF2H4 (2968/203577_at)
RBM8A (9939/213852_at)
SRRM1 (10250/201224_s_at)
U2AF1 (7307/202858_at)
U2AF2 (11338/218381_s_at)
CSTF1 (1477/202190_at)
RNPS1 (10921/200060_s_at)
SRSF3 (6428/202899_s_at)
SRSF4 (6429/201696_at)
SRSF5 (6430/212266_s_at)
GTF2F1 (2962/202355_s_at)
NHP2L1 (4809/201076_at)
DDX23 (9416/40465_at)
SF3B2 (10992/200619_at)
SF3B1 (23451/201070_x_at)
SF3B3 (23450/200687_s_at)
RBM5 (10181/201395_at)
SNRPA1 (6627/242146_at)
SF3A1 (10291/216457_s_at)
HNRNPU (3192/200593_s_at)
HNRNPC (3183/212626_x_at)
HNRNPUL1 (11100/209675_s_at)
HNRNPA3 (220988/1555653_at)
FUS (2521/215744_at)
HNRNPR (10236/208765_s_at)
SNRNP70 (6625/201221_s_at)
HNRNPH2 (3188/243201_at)
HNRNPL (3191/202072_at)
HNRNPA0 (10949/201055_s_at)
HNRNPH1 (3187/201031_s_at)
SUGP1 (57794/215004_s_at)
HNRNPA1 (3178/222040_at)
DHX9 (1660/202420_s_at)
Sample Class
GSM280338 LTBI
GSM280332 LTBI
GSM280344 LTBI
GSM280346 LTBI
GSM280350 cured PTB
GSM280334 cured PTB
GSM280340 cured PTB
GSM280348 cured PTB