

Transcriptomics Data Dictionary

| Table Name | Column Name | Data Type | Required | Description |
|---------------------------|-----------------------------|-----------|----------|--|
| alignment_summary_metrics | participant_id | STRING | null | The Participant ID. |
| alignment_summary_metrics | sample_id | STRING | null | The Sample ID. |
| alignment_summary_metrics | CATEGORY | STRING | null | One of either UNPAIRED (for a fragment run), FIRST_OF_PAIR when metrics are for only the first read in a paired run, SECOND_OF_PAIR when the metrics are for only the second read in a paired run or PAIR when the metrics are aggregated for both first and second reads in a pair. |
| alignment_summary_metrics | TOTAL_READS | INTEGER | null | The total number of reads including all PF and non-PF reads. When CATEGORY equals PAIR this value will be 2x the number of clusters. |
| alignment_summary_metrics | PF_READS | INTEGER | null | The number of PF reads where PF is defined as passing Illumina's filter. |
| alignment_summary_metrics | PCT_PF_READS | INTEGER | null | The fraction of reads that are PF ($PF_READS / TOTAL_READS$) |
| alignment_summary_metrics | PF_NOISE_READS | INTEGER | null | The number of PF reads that are marked as noise reads. A noise read is one which is composed entirely of A bases and/or N bases. These reads are marked as they are usually artifactual and are of no use in downstream analysis. |
| alignment_summary_metrics | PF_READS_ALIGNED | INTEGER | null | The number of PF reads that were aligned to the reference sequence. This includes reads that aligned with low quality (i.e. their alignments are ambiguous). |
| alignment_summary_metrics | PCT_PF_READS_ALIGNED | FLOAT | null | The percentage of PF reads that aligned to the reference sequence. $PF_READS_ALIGNED / PF_READS$ |
| alignment_summary_metrics | PF_ALIGNED_BASES | INTEGER | null | The total number of aligned PF bases. Non-primary alignments are not counted. Bases in aligned reads that do not correspond to reference (e.g. soft clips, insertions) are not counted. |
| alignment_summary_metrics | PF_HQ_ALIGNED_READS | INTEGER | null | The number of PF reads that were aligned to the reference sequence with a mapping quality of Q20 or higher signifying that the aligner estimates a 1/100 (or smaller) chance that the alignment is wrong. |
| alignment_summary_metrics | PF_HQ_ALIGNED_BASES | INTEGER | null | The number of bases aligned to the reference sequence in reads that were mapped at high quality. Will usually approximate $PF_HQ_ALIGNED_READS * READ_LENGTH$ but may differ when either mixed read lengths are present or many reads are aligned with gaps. |
| alignment_summary_metrics | PF_HQ_ALIGNED_Q20_BASES | INTEGER | null | The subset of $PF_HQ_ALIGNED_BASES$ where the base call quality was Q20 or higher. |
| alignment_summary_metrics | PF_HQ_MEDIAN_MISMATCHES | INTEGER | null | The median number of mismatches versus the reference sequence in reads that were aligned to the reference at high quality (i.e. $PF_HQ_ALIGNED_READS$). |
| alignment_summary_metrics | PF_MISMATCH_RATE | FLOAT | null | The rate of bases mismatching the reference for all bases aligned to the reference sequence. |
| alignment_summary_metrics | PF_HQ_ERROR_RATE | FLOAT | null | The fraction of bases that mismatch the reference in PF HQ aligned reads. |
| alignment_summary_metrics | PF_INDEL_RATE | FLOAT | null | The number of insertion and deletion events per 100 aligned bases. Uses the number of events as the numerator, not the number of inserted or deleted bases. |
| alignment_summary_metrics | MEAN_READ_LENGTH | FLOAT | null | The mean read length of the set of reads examined. When looking at the data for a single lane with equal length reads this number is just the read length. When looking at data for merged lanes with differing read lengths this is the mean read length of all reads. |
| alignment_summary_metrics | READS_ALIGNED_IN_PAIRS | INTEGER | null | The number of aligned reads whose mate pair was also aligned to the reference. |
| alignment_summary_metrics | PCT_READS_ALIGNED_IN_PAIRS | FLOAT | null | The fraction of reads whose mate pair was also aligned to the reference. $READS_ALIGNED_IN_PAIRS / PF_READS_ALIGNED$ |
| alignment_summary_metrics | PF_READS_IMPROPER_PAIRS | INTEGER | null | The number of (primary) aligned reads that are **not** properly aligned in pairs (as per SAM flag 0x2)." |
| alignment_summary_metrics | PCT_PF_READS_IMPROPER_PAIRS | FLOAT | null | The fraction of (primary) reads that are *not* properly aligned in pairs (as per SAM flag 0x2). $PF_READS_IMPROPER_PAIRS / PF_READS_ALIGNED$ " |
| alignment_summary_metrics | BAD_CYCLES | INTEGER | null | The number of instrument cycles in which 80% or more of base calls were no-calls. |
| alignment_summary_metrics | STRAND_BALANCE | FLOAT | null | The number of PF reads aligned to the positive strand of the genome divided by the number of PF reads aligned to the genome. |
| alignment_summary_metrics | PCT_CHIMERAS | FLOAT | null | The fraction of reads that map outside of a maximum insert size (usually 100kb) or that have the two ends mapping to different chromosomes. |

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| alignment_summary_metrics | PCT_ADAPTER | FLOAT | null | The fraction of PF reads that are unaligned and match to a known adapter sequence right from the start of the read. |
| alignment_summary_metrics | SAMPLE | STRING | null | The sample to which these metrics apply. If null, it means they apply to all reads in the file. |
| alignment_summary_metrics | LIBRARY | STRING | null | The library to which these metrics apply. If null, it means that the metrics were accumulated at the sample level. |
| alignment_summary_metrics | READ_GROUP | STRING | null | The read group to which these metrics apply. If null, it means that the metrics were accumulated at the library or sample level. |
| feature_counts | participant_id | STRING | NULLABLE | The Participant ID. |
| feature_counts | sample_id | STRING | NULLABLE | The Sample ID. |
| feature_counts | Geneid | STRING | NULLABLE | Ensembl ID |
| feature_counts | Chr | STRING | NULLABLE | Chromosome name |
| feature_counts | Start | STRING | NULLABLE | Gene chromosomal start position. |
| feature_counts | End | STRING | NULLABLE | Gene chromosomal end position |
| feature_counts | Strand | STRING | NULLABLE | Strand |
| feature_counts | Length | INTEGER | NULLABLE | The total number of non-overlapping bases in exons belonging to the same gene for each gene. |
| feature_counts | Value | INTEGER | NULLABLE | Counts |
| genome_check_HW_MAF | sample_id_1 | STRING | REQUIRED | Sample ID for first sample |
| genome_check_HW_MAF | sample_id_2 | STRING | REQUIRED | Sample ID for second sample |
| genome_check_HW_MAF | FID1 | STRING | REQUIRED | Family ID for first sample |
| genome_check_HW_MAF | IID1 | STRING | REQUIRED | Individual ID for first sample |
| genome_check_HW_MAF | FID2 | STRING | REQUIRED | Family ID for second sample |
| genome_check_HW_MAF | IID2 | STRING | REQUIRED | Individual ID for second sample |
| genome_check_HW_MAF | RT | STRING | REQUIRED | Relationship type inferred from .fam/.ped file |
| genome_check_HW_MAF | EZ | INTEGER | REQUIRED | IBD sharing expected value, based on just .fam/.ped relationship |
| genome_check_HW_MAF | Z0 | FLOAT | REQUIRED | $P(\text{IBD}=0)$ |
| genome_check_HW_MAF | Z1 | FLOAT | REQUIRED | $P(\text{IBD}=1)$ |
| genome_check_HW_MAF | Z2 | FLOAT | REQUIRED | $P(\text{IBD}=2)$ |
| genome_check_HW_MAF | PI_HAT | FLOAT | REQUIRED | Proportion IBD, i.e. $P(\text{IBD}=2) + 0.5 * P(\text{IBD}=1)$ |
| genome_check_HW_MAF | PHE | INTEGER | REQUIRED | Pairwise phenotypic code (1, 0, -1 = AA, AU, and UU pairs, respectively) |
| genome_check_HW_MAF | DST | FLOAT | REQUIRED | IBS distance, i.e. $(\text{IBS}2 + 0.5 * \text{IBS}1) / (\text{IBS}0 + \text{IBS}1 + \text{IBS}2)$ |
| genome_check_HW_MAF | PPC | FLOAT | REQUIRED | IBS binomial test |
| genome_check_HW_MAF | RATIO | FLOAT | NULLABLE | HETHET : IBS0 SNP ratio (expected value 2) |
| insert_size_metrics | participant_id | STRING | null | The Participant ID. |
| insert_size_metrics | sample_id | STRING | null | The Sample ID. |
| insert_size_metrics | MEDIAN_INSERT_SIZE | INTEGER | null | The MEDIAN insert size of all paired end reads where both ends mapped to the same chromosome. |
| insert_size_metrics | MODE_INSERT_SIZE | INTEGER | null | The MODE insert size |
| insert_size_metrics | MEDIAN_ABSOLUTE_DEVIATION | INTEGER | null | The median absolute deviation of the distribution. If the distribution is essentially normal then the standard deviation can be estimated as $\sim 1.4826 * \text{MAD}$. |
| insert_size_metrics | MIN_INSERT_SIZE | INTEGER | null | The minimum measured insert size. This is usually 1 and not very useful as it is likely artifactual. |
| insert_size_metrics | MAX_INSERT_SIZE | INTEGER | null | The maximum measure insert size by alignment. This is usually very high representing either an artifact or possibly the presence of a structural re-arrangement. |

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|----------------------------|---------------------|-----------|----------|--|
| insert_size_metrics | MEAN_INSERT_SIZE | FLOAT | null | The mean insert size of the "core" of the distribution. Artefactual outliers in the distribution often cause calculation of nonsensical mean and stdev values. To avoid this the distribution is first trimmed to a "core" distribution of +/- N median absolute deviations around the median insert size. By default N=10 |
| insert_size_metrics | STANDARD_DEVIATION | FLOAT | null | Standard deviation of insert sizes over the "core" of the distribution." |
| insert_size_metrics | READ_PAIRS | INTEGER | null | The total number of read pairs that were examined in the entire distribution. |
| insert_size_metrics | PAIR_ORIENTATION | STRING | null | The pair orientation of the reads in this data category. |
| insert_size_metrics | WIDTH_OF_10_PERCENT | INTEGER | null | The width" of the bins centered that encompass 10% of all read pairs." |
| insert_size_metrics | WIDTH_OF_20_PERCENT | INTEGER | null | The width" of the bins centered that encompass 20% of all read pairs." |
| insert_size_metrics | WIDTH_OF_30_PERCENT | INTEGER | null | The width" of the bins centered that encompass 30% of all read pairs." |
| insert_size_metrics | WIDTH_OF_40_PERCENT | INTEGER | null | The width" of the bins centered that encompass 40% of all read pairs." |
| insert_size_metrics | WIDTH_OF_50_PERCENT | INTEGER | null | The width" of the bins centered that encompass 50% of all read pairs." |
| insert_size_metrics | WIDTH_OF_60_PERCENT | INTEGER | null | The width" of the bins centered that encompass 60% of all read pairs." |
| insert_size_metrics | WIDTH_OF_70_PERCENT | INTEGER | null | The width" of the bins centered that encompass 70% of all read pairs. This metric divided by 2 should approximate the standard deviation when the insert size distribution is a normal distribution." |
| insert_size_metrics | WIDTH_OF_80_PERCENT | INTEGER | null | The width" of the bins centered that encompass 80% of all read pairs." |
| insert_size_metrics | WIDTH_OF_90_PERCENT | INTEGER | null | The width" of the bins centered that encompass 90% of all read pairs." |
| insert_size_metrics | WIDTH_OF_95_PERCENT | INTEGER | null | The width" of the bins centered that encompass 95% of all read pairs." |
| insert_size_metrics | WIDTH_OF_99_PERCENT | INTEGER | null | The width" of the bins centered that encompass 100% of all read pairs." |
| insert_size_metrics | SAMPLE | STRING | null | The sample to which these metrics apply. If null, it means they apply to all reads in the file. |
| insert_size_metrics | LIBRARY | STRING | null | The library to which these metrics apply. If null, it means that the metrics were accumulated at the sample level. |
| insert_size_metrics | READ_GROUP | STRING | null | The read group to which these metrics apply. If null, it means that the metrics were accumulated at the library or sample level. |
| quantification_genes | participant_id | STRING | NULLABLE | The Participant ID. |
| quantification_genes | sample_id | STRING | NULLABLE | The Sample ID. |
| quantification_genes | Name | STRING | NULLABLE | Name of the target transcript provided in the input transcript database (FASTA file). |
| quantification_genes | Length | FLOAT | NULLABLE | Length of the target transcript in nucleotides. |
| quantification_genes | EffectiveLength | FLOAT | NULLABLE | Computed effective length of the target transcript. It takes into account all factors being modeled that will effect the probability of sampling fragments from this transcript, including the fragment length distribution and sequence-specific and gc-fragment bias (if they are being modeled). |
| quantification_genes | TPM | FLOAT | NULLABLE | This is salmon's estimate of the relative abundance of this transcript in units of Transcripts Per Million (TPM). TPM is the recommended relative abundance measure to use for downstream analysis. |
| quantification_genes | NumReads | FLOAT | NULLABLE | Salmon's estimate of the number of reads mapping to each transcript that was quantified. It is an "estimate" insofar as it is the expected number of reads that have originated from each transcript given the structure of the uniquely mapping and multi-mapping reads and the relative abundance estimates for each transcript. |
| quantification_transcripts | participant_id | STRING | NULLABLE | The Participant ID. |
| quantification_transcripts | sample_id | STRING | NULLABLE | The Sample ID. |
| quantification_transcripts | Name | STRING | NULLABLE | Name of the target transcript provided in the input transcript database (FASTA file). |
| quantification_transcripts | Length | INTEGER | NULLABLE | Length of the target transcript in nucleotides. |
| quantification_transcripts | EffectiveLength | FLOAT | NULLABLE | Computed effective length of the target transcript. It takes into account all factors being modeled that will effect the probability of sampling fragments from this transcript, including the fragment length distribution and sequence-specific and gc-fragment bias (if they are being modeled). |



Accelerating Medicines Partnership: Parkinson's Disease (AMP PD)

Transcriptomics Data Dictionary

| Table Name | Column Name | Data Type | Required | Description |
|----------------------------|--------------------------------|-----------|----------|--|
| quantification_transcripts | TPM | FLOAT | NULLABLE | Salmon's estimate of the relative abundance of this transcript in units of Transcripts Per Million (TPM). TPM is the recommended relative abundance measure to use for downstream analysis. |
| quantification_transcripts | NumReads | FLOAT | NULLABLE | Salmon's estimate of the number of reads mapping to each transcript that was quantified. It is an "estimate" insofar as it is the expected number of reads that have originated from each transcript given the structure of the uniquely mapping and multi-mapping reads and the relative abundance estimates for each transcript. |
| rna_quality_metrics | sample_id | STRING | NULLABLE | The Sample ID. |
| rna_quality_metrics | Specimen_Quantity | FLOAT | NULLABLE | Quantity of RNA received by sequencing facility from biorepository. |
| rna_quality_metrics | Concentration | FLOAT | NULLABLE | Concentration of RNA in sample received by sequencing facility from biorepository. |
| rna_quality_metrics | Submitted_Volume__ul_ | FLOAT | NULLABLE | Volume of sample received by sequencing facility from biorepository. |
| rna_quality_metrics | Normalization_Volume__30ng_ul_ | FLOAT | NULLABLE | Volume of sample following RNA concentration normalization. |
| rna_quality_metrics | Total_Volume__ul_ | FLOAT | NULLABLE | Sample total volume. |
| rna_quality_metrics | Input_RNASeq__ng_ | FLOAT | NULLABLE | RNA quantity used as input for RNAseq |
| rna_quality_metrics | Input_miRNA__ng_ | FLOAT | NULLABLE | RNA quantity used as input for smallRNA project |
| rna_quality_metrics | _260_230_Ratio | FLOAT | NULLABLE | Ratio of nanodrop spectrophotometer absorbance measurements at 260 nm and 280 nm. |
| rna_quality_metrics | _260_280_Ratio | FLOAT | NULLABLE | Ratio of nanodrop spectrophotometer absorbance measurements at 260 nm and 230 nm. |
| rna_quality_metrics | RIN_Value | FLOAT | NULLABLE | RNA integrity number |
| rna_quality_metrics | Box | STRING | NULLABLE | Box used to ship sample from biorepository to sequencing facility. |
| rna_quality_metrics | Plate | STRING | NULLABLE | Library preparation plate ID. |
| rna_quality_metrics | Position | INTEGER | NULLABLE | Sample position on library preparation 96 well plate. |
| rna_seq_metrics | participant_id | STRING | null | The Participant ID. |
| rna_seq_metrics | sample_id | STRING | null | The Sample ID. |
| rna_seq_metrics | PF_BASES | INTEGER | null | The total number of PF bases including non-aligned reads. |
| rna_seq_metrics | PF_ALIGNED_BASES | INTEGER | null | The total number of aligned PF bases. Non-primary alignments are not counted. Bases in aligned reads that do not correspond to reference (e.g. soft clips, insertions) are not counted. |
| rna_seq_metrics | RIBOSOMAL_BASES | INTEGER | null | Number of bases in primary alignments that align to ribosomal sequence. |
| rna_seq_metrics | CODING_BASES | INTEGER | null | Number of bases in primary alignments that align to a non-UTR coding base for some gene, and not ribosomal sequence. |
| rna_seq_metrics | UTR_BASES | INTEGER | null | Number of bases in primary alignments that align to a UTR base for some gene, and not a coding base. |
| rna_seq_metrics | INTRONIC_BASES | INTEGER | null | Number of bases in primary alignments that align to an intronic base for some gene, and not a coding or UTR base. |
| rna_seq_metrics | INTERGENIC_BASES | INTEGER | null | Number of bases in primary alignments that do not align to any gene. |
| rna_seq_metrics | IGNORED_READS | INTEGER | null | Number of primary alignments that are mapped to a sequence specified on command-line as IGNORED_SEQUENCE. These are not counted in PF_ALIGNED_BASES, CORRECT_STRAND_READS, INCORRECT_STRAND_READS, or any of the base-counting metrics. These reads are counted in PF_BASES. |
| rna_seq_metrics | CORRECT_STRAND_READS | INTEGER | null | Number of aligned reads that are mapped to the correct strand. 0 if library is not strand-specific. |
| rna_seq_metrics | INCORRECT_STRAND_READS | INTEGER | null | Number of aligned reads that are mapped to the incorrect strand. 0 if library is not strand-specific. |
| rna_seq_metrics | NUM_R1_TRANSCRIPT_STRAND_READS | INTEGER | null | The number of reads that support the model where R1 is on the strand of transcription and R2 is on the opposite strand. |
| rna_seq_metrics | NUM_R2_TRANSCRIPT_STRAND_READS | INTEGER | null | The fraction of reads that support the model where R2 is on the strand of transcription and R1 is on the opposite strand. |

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| Table Name | Column Name | Data Type | Required | Description |
|-----------------|--------------------------------|-----------|----------|---|
| rna_seq_metrics | NUM_UNEXPLAINED_READS | INTEGER | null | The fraction of reads for which the transcription strand model could not be inferred. |
| rna_seq_metrics | PCT_R1_TRANSCRIPT_STRAND_READS | FLOAT | null | The fraction of reads that support the model where R1 is on the strand of transcription and R2 is on the opposite strand. For unpaired reads, it is the fraction of reads that are on the transcription strand (out of all the reads). |
| rna_seq_metrics | PCT_R2_TRANSCRIPT_STRAND_READS | FLOAT | null | The fraction of reads that support the model where R2 is on the strand of transcription and R1 is on the opposite strand. For unpaired reads, it is the fraction of reads that are on opposite strand than that of the the transcription strand (out of all the reads). |
| rna_seq_metrics | PCT_RIBOSOMAL_BASES | FLOAT | null | Fraction of PF_ALIGNED_BASES that mapped to regions encoding ribosomal RNA, RIBOSOMAL_BASES/PF_ALIGNED_BASES |
| rna_seq_metrics | PCT_CODING_BASES | FLOAT | null | Fraction of PF_ALIGNED_BASES that mapped to protein coding regions of genes, CODING_BASES/PF_ALIGNED_BASES |
| rna_seq_metrics | PCT_UTR_BASES | FLOAT | null | Fraction of PF_ALIGNED_BASES that mapped to untranslated regions (UTR) of genes, UTR_BASES/PF_ALIGNED_BASES |
| rna_seq_metrics | PCT_INTRONIC_BASES | FLOAT | null | Fraction of PF_ALIGNED_BASES that correspond to gene introns, INTRONIC_BASES/PF_ALIGNED_BASES |
| rna_seq_metrics | PCT_INTERGENIC_BASES | FLOAT | null | Fraction of PF_ALIGNED_BASES that mapped to intergenic regions of genomic DNA, INTERGENIC_BASES/PF_ALIGNED_BASES |
| rna_seq_metrics | PCT_MRNA_BASES | FLOAT | null | Sum of bases mapped to regions corresponding to UTRs and coding regions of mRNA transcripts, PCT_UTR_BASES + PCT_CODING_BASES |
| rna_seq_metrics | PCT_USABLE_BASES | FLOAT | null | The fraction of bases mapping to mRNA divided by the total number of PF bases, (CODING_BASES + UTR_BASES)/PF_BASES. |
| rna_seq_metrics | PCT_CORRECT_STRAND_READS | FLOAT | null | Fraction of reads corresponding to mRNA transcripts which map to the correct strand of a reference genome = CORRECT_STRAND_READS/(CORRECT_STRAND_READS + INCORRECT_STRAND_READS). 0 if library is not strand-specific. |
| rna_seq_metrics | MEDIAN_CV_COVERAGE | FLOAT | null | The median coefficient of variation (CV) or stdev/mean for coverage values of the 1000 most highly expressed transcripts. Ideal value = 0. |
| rna_seq_metrics | MEDIAN_5PRIME_BIAS | FLOAT | null | The median 5 prime bias of the 1000 most highly expressed transcripts. The 5 prime bias is calculated per transcript as: mean coverage of the 5 prime-most 100 bases divided by the mean coverage of the whole transcript. |
| rna_seq_metrics | MEDIAN_3PRIME_BIAS | FLOAT | null | The median 3 prime bias of the 1000 most highly expressed transcripts, where 3 prime bias is calculated per transcript as: mean coverage of the 3 prime-most 100 bases divided by the mean coverage of the whole transcript. |
| rna_seq_metrics | MEDIAN_5PRIME_TO_3PRIME_BIAS | FLOAT | null | The ratio of coverage at the 5 prime end to the 3 prime end based on the 1000 most highly expressed transcripts. |
| rna_seq_metrics | SAMPLE | STRING | null | The sample to which these metrics apply. If null, it means they apply to all reads in the file. |
| rna_seq_metrics | LIBRARY | STRING | null | The library to which these metrics apply. If null, it means that the metrics were accumulated at the sample level. |
| rna_seq_metrics | READ_GROUP | STRING | null | The read group to which these metrics apply. If null, it means that the metrics were accumulated at the library or sample level. |
| rna_seq_samples | participant_id | STRING | REQUIRED | The Participant ID. |
| rna_seq_samples | sample_id | STRING | REQUIRED | The Sample ID. |
| rna_seq_samples | visit_month | FLOAT | REQUIRED | Numeric encoding of a visit. |
| rna_seq_samples | BAM | STRING | REQUIRED | Location of .bam file in GCS. |
| rna_seq_samples | BAI | STRING | REQUIRED | Location of .bai file in GCS. |
| rna_seq_samples | QUANT_SF | STRING | REQUIRED | Location of quant.sf file in GCS. |
| rna_seq_samples | QUANT_GENES_SF | STRING | REQUIRED | Location of quant.genes.sf file in GCS. |

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|-----------------|-----------------------------|-----------|----------|--|
| rna_seq_samples | FEATURECOUNTS_TSV | STRING | REQUIRED | Location of featureCounts.tsv file in GCS. |
| star_metrics | participant_id | STRING | REQUIRED | The Participant ID. |
| star_metrics | sample_id | STRING | REQUIRED | The Sample ID. |
| star_metrics | num_GCAG_splices | INTEGER | REQUIRED | Number of splices: GC/AG |
| star_metrics | num_splices | INTEGER | REQUIRED | Number of splices: Total |
| star_metrics | started_job_on | TIMESTAMP | REQUIRED | Started job on |
| star_metrics | uniquely_mapped_percent | FLOAT | REQUIRED | Uniquely mapped reads % |
| star_metrics | insertion_length | FLOAT | REQUIRED | Insertion average length |
| star_metrics | deletion_length | FLOAT | REQUIRED | Deletion average length |
| star_metrics | unmapped_tooshort_percent | FLOAT | REQUIRED | % of reads unmapped: too short |
| star_metrics | avg_mapped_read_length | FLOAT | REQUIRED | Average mapped length |
| star_metrics | deletion_rate | FLOAT | REQUIRED | Deletion rate per base |
| star_metrics | started_mapping_on | TIMESTAMP | REQUIRED | Started mapping on |
| star_metrics | mismatch_rate | FLOAT | REQUIRED | Mismatch rate per base, % |
| star_metrics | avg_input_read_length | INTEGER | REQUIRED | Average input read length |
| star_metrics | num_ATAC_splices | INTEGER | REQUIRED | Number of splices: AT/AC |
| star_metrics | num_annotated_splices | INTEGER | REQUIRED | Number of splices: Annotated (sjdb) |
| star_metrics | num_GTAG_splices | INTEGER | REQUIRED | Number of splices: GT/AG |
| star_metrics | uniquely_mapped | INTEGER | REQUIRED | Uniquely mapped reads number |
| star_metrics | multimapped_toomany | INTEGER | REQUIRED | Number of reads mapped to too many loci |
| star_metrics | unmapped_mismatches_percent | FLOAT | REQUIRED | % of reads unmapped: too many mismatches |
| star_metrics | mapping_speed | FLOAT | REQUIRED | Mapping speed, Million of reads per hour |
| star_metrics | total_reads | INTEGER | REQUIRED | Number of input reads |
| star_metrics | num_chimeric_reads | INTEGER | REQUIRED | Number of chimeric reads |
| star_metrics | insertion_rate | FLOAT | REQUIRED | Insertion rate per base |
| star_metrics | unmapped_other_percent | FLOAT | REQUIRED | % of reads unmapped: other |
| star_metrics | pct_chimeric_reads | FLOAT | REQUIRED | % of chimeric reads |
| star_metrics | multimapped_percent | FLOAT | REQUIRED | % of reads mapped to multiple loci |
| star_metrics | multimapped | INTEGER | REQUIRED | Number of reads mapped to multiple loci |
| star_metrics | num_noncanonical_splices | INTEGER | REQUIRED | Number of splices: Non-canonical |
| star_metrics | finished_on | TIMESTAMP | REQUIRED | Finished on |
| star_metrics | multimapped_toomany_percent | FLOAT | REQUIRED | % of reads mapped to too many loci |
| star_metrics | unmapped_mismatches | INTEGER | REQUIRED | Derived from multiqc. |
| star_metrics | unmapped_tooshort | INTEGER | REQUIRED | Derived from multiqc. |
| star_metrics | unmapped_other | INTEGER | REQUIRED | Derived from multiqc. |



Accelerating Medicines Partnership: Parkinson's Disease (AMP PD)

Transcriptomics Data Dictionary

| Table Name (Tier 2) | Column Name | Data Type | Required | Description |
|------------------------------------|---------------------------------|-----------|----------|--|
| Clinically_Reported_Genetic_Status | participant_id | STRING | REQUIRED | Study Subject ID |
| Clinically_Reported_Genetic_Status | GUID | STRING | NULLABLE | Global Unique ID (USUBJID) |
| Clinically_Reported_Genetic_Status | visit_name | STRING | REQUIRED | Visit name: M - in months, SC - screening visit, LOG - records without visit; #2 or #3 define repeated records at the same visit or repeated visit |
| Clinically_Reported_Genetic_Status | visit_month | FLOAT | NULLABLE | Numeric visit in months; for visits prior baseline -1, -2 is an order of screening visits |
| Clinically_Reported_Genetic_Status | genetic_status_enrollment | STRING | NULLABLE | Participant genetic status based on PD-associated mutations (LRRK2, GBA, or SNCA) at enrollment |
| Clinically_Reported_Genetic_Status | genetic_status_wgs | STRING | NULLABLE | Participant genetic status based on the determined by Whole Genome Sequencing selected PD-associated variants (LRRK2 G2019S, LRRK2 R1441G, GBA N370S, and SNCA A53T) |
| amp_pd_participant_mutations | participant_id | STRING | null | null |
| amp_pd_participant_mutations | has_known_GBA_mutation_in_WGS | STRING | null | null |
| amp_pd_participant_mutations | has_known_LRRK2_mutation_in_WGS | STRING | null | null |
| amp_pd_participant_mutations | has_known_SNCA_mutation_in_WGS | STRING | null | null |
| amp_pd_participant_mutations | has_known_PD_Mutation_in_WGS | STRING | null | null |