

VCF Format

VCF (Variant Call Format)

```
##fileformat=VCFv4.2
##reference=GRCh38
#CHROM POS ID REF ALT QUAL FILTER INFO FORMAT SAMPLE1
chr1 10177 . A AC 50 PASS DP=32;AF=0.5 GT:DP:GQ 0/1:32:50
chr1 10352 rs123 T A 100 PASS DP=45;AF=1.0 GT:DP:GQ 1/1:45:99
```

VCF Columns

CHROM
Chromosome

POS
Position

REF
Reference

ALT
Alternate

QUAL
Quality

INFO
Annotations

Genotype (GT)

- 0/0 = homozygous reference
- 0/1 = heterozygous
- 1/1 = homozygous alternate

Key INFO Fields

- DP = Total depth
- AF = Allele frequency

AC = Allele count

AN = Total alleles