A Big Earth Data Platform for Three Poles

**Genomic variation data of modern Tibetans (2020)**

1、Description

We obtained the whole genome variation data of 30 Tibetan individuals. The SNP typing of 30 samples was carried out by DNA array method, and about 700000 loci (including nuclear genome, mitochondrial DNA and Y chromosome) of each sample were obtained. First, after extracting genomic DNA, DNA amplification, enzymatic fragmentation, precipitation and re suspension were carried out. After the sample was incubated overnight and hybridized with beadchip, the DNA was annealed to obtain a site-specific 50 mer probe, covalently coupled with an Infinium bead type. Then Infinium XT was used to extend the enzyme base to give the allele specificity, and then fluorescent staining was carried out. The fluorescence intensity of the beads was detected by iSCAN system, and the Illumina software automatically performed the analysis and genotype recognition. Finally, the SNP typing results of each sample were obtained. Based on the above data, relevant biological information analysis (mainly including chip site quality control analysis, Y chromosome and mitochondrial DNA haplotype analysis) was carried out. This data is helpful to analyze the genetic structure of Tibetan population from the perspective of nuclear genome, Y chromosome and mitochondrial DNA. By comparing with the data of people around the plateau, we can trace the migration and settlement history of the plateau population comprehensively.

2、Keywords

Theme：Grassland
Discipline：Terrestrial Surface
Places：Tibetans, variants, whole genome
Time：Year 2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1208.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.470748928891506 | - |
| west：87.14151711914064 | - | east：89.70133157226564 |
| - | south：28.74123370305203 | - |

5、Time frame:2019-12-12 16:00:00+00:00--2020-01-09 03:59:59+00:00

6、Reference method

References to data:

KONG Qingpeng. Genomic variation data of modern Tibetans (2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2710512020

References to articles:

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

name: KONG Qingpeng
unit: Kunming Institute of Zoology, Chinese Academy of Sciences
email: kongqp@mail.kiz.ac.cn