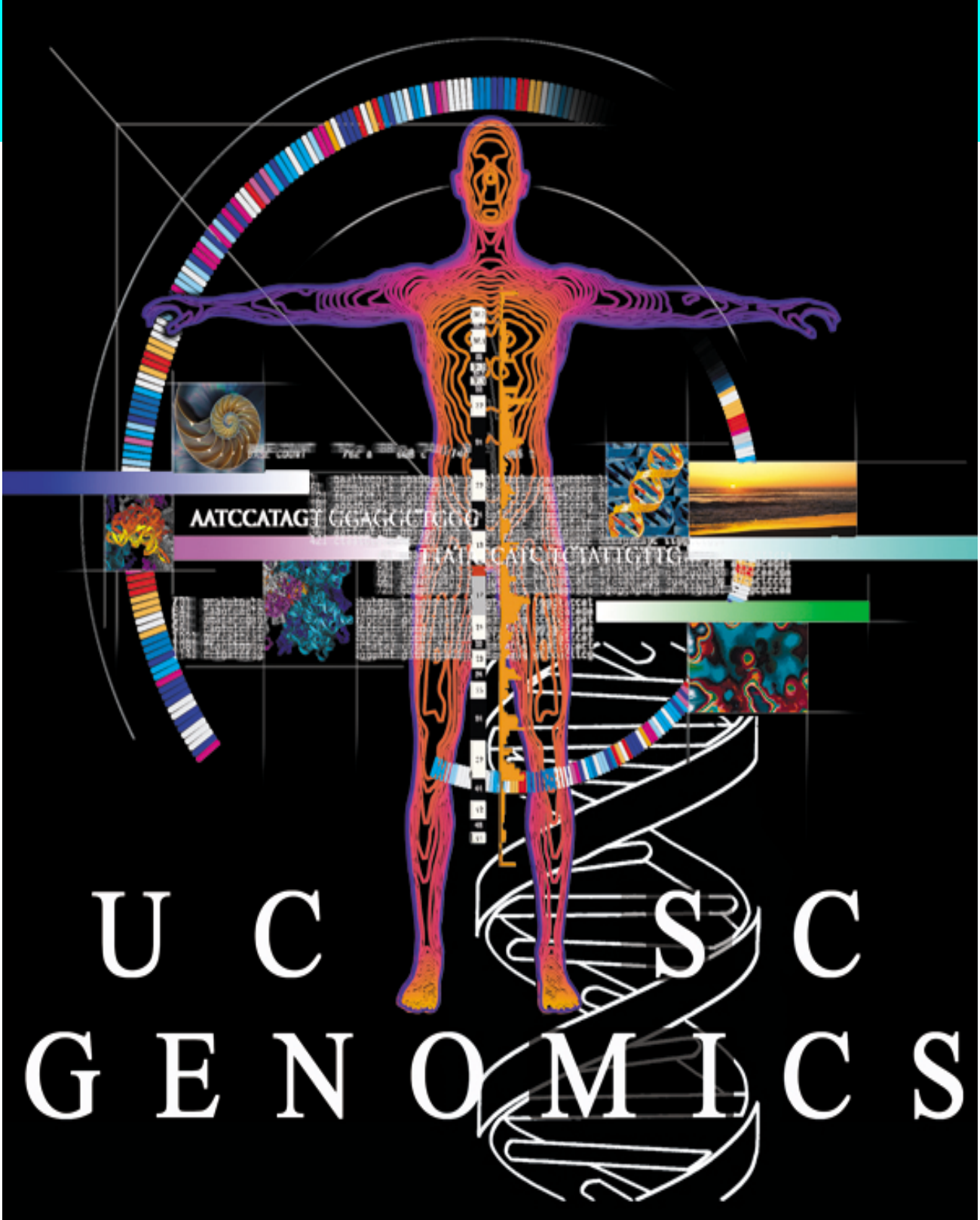


UCSC Genome Browser API

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UCSC Genome Browser REST API Returning Assembly Hub JSON Data



Examples:

api.genome.ucsc.edu/list/hubGenomes?hubUrl=http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/hub.txt

```
"CAST_EiJ": {
  "organism": "southeastern Asian house mouse",
  "description": "26 Apr 2016/CAST_EiJ_v1",
  "trackDbFile": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/GCA_001624445.1_CAST_EiJ_v1.trackDb.txt",
  "twoBitPath": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/GCA_001624445.1_CAST_EiJ_v1.2bit",
  "groups": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/groups.txt",
  "orderKey": 0
},
```

api.genome.ucsc.edu/list/tracks?hubUrl=http://URL_to_AH/mouseStrains/hub.txt;genome=CAST_EiJ

```
"bigMaf": {
  "shortLabel": "Mice Strains",
  "type": "bigMaf",
  "longLabel": "Cactus alignments, 17 mice strains plus rat",
  "itemCount": 0,
  "visibility": "full",
  "group": "compGeno",
  "html": "html/mouseStrains.html",
  "summary": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/maf/CAST_EiJ.bigMafSummary.bb",
  "speciesOrder": "mm10 SPRET_EiJ PWK_PhJ WSB_EiJ NZO_H1LtJ C57BL_6NJ ... CBA_J C3H_HeJ AKR_J BALB_cJ A_J LP_J 129S1_SvImJ rn6",
  "frames": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/maf/CAST_EiJ.bigMafFrames.bb",
  "bigDataUrl": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/maf/CAST_EiJ.bigMaf.bb"
},
```

api.genome.ucsc.edu/getData/sequence?hubUrl=http://URL_to_AH/hub.txt;genome=CAST_EiJ;chrom=chrM

```
{
  "hubUrl": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/hub.txt",
  "genome": "CAST_EiJ",
  "chrom": "chrM",
  "start": 0
  "end": 16299,
  "dna": "GTTAATGTAGCTTAA ... AATAAACATTAACAA",
}
```

api.genome.ucsc.edu/getData/track?hubUrl=http://URL_to_AH/hub.txt;genome=CAST_EiJ;track=gc5Base;chrom=chrM;start=0;end=15

```
{
  "hubUrl": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/hub.txt",
  "genome": "CAST_EiJ",
  "chromSize": 16299,
  "start": 0,
  "end": 15,
  "bigDataUrl": "http://hgdownload.soe.ucsc.edu/hubs/mouseStrains/GCA_001624445.1_CAST_EiJ_v1/bbi/GCA_001624445.1_CAST_EiJ_v1.gc5Base.bw",
  "trackType": "bigWig 0 100",
  "gc5Base": {
    "chrM": [
      {
        "start": 0,
        "end": 5,
        "value": 20
      },
      {
        "start": 5,
        "end": 10,
        "value": 40
      },
      {
        "start": 10,
        "end": 15,
        "value": 20
      }
    ]
  },
  "itemsReturned": 3
}
```

Functions:

- List hub genomes
- List data tracks
- Get DNA sequence
- Get track data
- List browser genomes
- List public hubs
- List track schema
- List chromosomes in assembly
- List chromosomes in data track

Endpoints:

- /list/hubGenomes
- /list/tracks
- /getData/sequence
- /getData/track
- /list/publicHubs
- /list/ucscGenomes
- /list/chromosomes
- /list/schema

Parameters:

- hubUrl=<url>
- genome=<name>
- track=<trackName>
- chrom=<chrN>
- start=<123>
- end=<456>
- maxItemsOutput=<1000>
- trackLeavesOnly=1
- jsonOutputArrays=1

Access URL:



api.genome.ucsc.edu