**Physical Schema of Chrom12 Database (by Jenny Su)**

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| --- | --- | --- |
| Protein | | |
| Accession\_No  Protein\_id  Protein\_name  Amino\_acid\_sequence | VARCHAR (20)  VARCHAR (20)  VARCHAR (500)  TEXT | PK,FK |
| Index: Protein\_name | | |

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| --- | --- | --- |
| Gene | | |
| Accession\_No  Gene\_Identifier  Chromosomal\_location  Organism  Sequence\_Length  DNA\_Sequence  CDS\_start  CDS\_end  CDS\_sequence | VARCHAR (20)  VARCHAR (200)  VARCHAR (200)  VARCHAR (20)  INT  LONGTEXT  INT  INT  TEXT | PK |
| Index: Gene\_Identifier  Index: Accession\_No. | | |

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| CodonUsage\_per\_Entry | | |
| CodonUsage\_entry\_id  Accession\_No  Amacid  Codon  Number  per1000  Fraction  Codon\_id | INT  VARCHAR (20)  CHAR(3)  CHAR(6)  INT  Decimal (10,5)  Decimal (10,5)  INT | PK  FK  FK |
| Index: Accession\_No. | | |

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| Codon | | |
| Codon\_id  Codon  Amacid | INT  CHAR (3)  CHAR (6) | PK |
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| CodonUsage\_per\_Chrom | | |
| CodonUsage\_Chrom\_id  Amacid  Codon  Number  per1000  Fraction  Codon\_id | INT  CHAR (3)  CHAR (6)  INT  Decimal (10,5)  Decimal (10,5)  INT | PK  FK |
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