**data sheet**

**Genetic code reading frame table**

|  |  |  |
| --- | --- | --- |
|  | SECOND LETTER |  |
| **U** | **C** | **A** | **G** |
| FIRST LETTER | **U** | phenylalanine**PHE** | serine**SER** | tyrosine**TYR** | cysteine**CYS** | **U** | THIRD LETTER |
| phenylalanine**PHE** | serine**SER** | tyrosine**TYR** | cysteine**CYS** | **C** |
| leucine**LEU** | serine**SER** | stop | stop | **A** |
| leucine**LEU** | serine**SER** | stop | tryptophan**TRP** | **G** |
| **C** | leucine**LEU** | proline**PRO** | histidine**HIS** | arginine**ARG** | **U** |
| leucine**LEU** | proline**PRO** | histidine**HIS** | arginine**ARG** | **C** |
| leucine**LEU** | proline**PRO** | glutamine**GLN** | arginine**ARG** | **A** |
| leucine**LEU** | proline**PRO** | glutamine**GLN** | arginine**ARG** | **G** |
| **A** | isoleucine**ILE** | threonine**THR** | asparagine**ASN** | serine**SER** | **U** |
| isoleucine**ILE** | threonine**THR** | asparagine**ASN** | serine**SER** | **C** |
| isoleucine**ILE** | threonine**THR** | lysine**LYS** | arginine**ARG** | **A** |
| methionine**MET** | threonine**THR** | lysine**LYS** | arginine**ARG** | **G** |
| **G** | valine**VAL** | alanine**ALA** | aspartic acid**ASP** | glycine**GLY** | **U** |
| valine**VAL** | alanine**ALA** | aspartic acid**ASP** | glycine**GLY** | **C** |
| valine**VAL** | alanine**ALA** | glutamic acid**GLU** | glycine**GLY** | **A** |
| valine**VAL** | alanine**ALA** | glutamic acid**GLU** | glycine**GLY** | **G** |
|  | **U** | **C** | **A** | **G** |  |
| SECOND LETTER |

Use this table to find out what amino acid each codon represents. Locate the first letter of the codon on the left edge of the table to identify a block, then the second letter of the codon across the top to identify the column. Locate the third letter of the codon on the right edge of the table to identify the amino acid.

For example, the codon ‘CAU’ codes for histidine (HIS).

ast0812 | Proteins 3: Genetic code reading frame table (data sheet) developed for the Department of Education WA

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