

IUB/IUPAC code¹

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¹References:

- [IUPAC nucleotide code and IUPAC amino acid code](#)
- [IUPAC code table](#)
- [Sequence representation](#)
- <http://www.ncbi.nlm.nih.gov/BLAST/blastcgihelp.shtml>
- [FASTA format description](#)
- [What is FASTA format?](#)

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Table 1: IUPAC nucleotide code

IUPAC nucleotide code	Base	Comment
A	Adenine	腺嘌呤
C	Cytosine	胞嘧啶
G	Guanine	鸟嘌呤
T	Thymine	胸腺嘧啶
U	Uracil	尿嘧啶
R	Purine (A or G)	嘌呤
Y	Pyrimidine (C, T or U)	嘧啶
S	C, G	Strong
W	A, T, U	Weak
K	G, T, U	Keto (酮基)
M	A, C	Amino (氨基)
B	C, G, T, U	not A
D	A, G, T, U	not C
H	A, C, T, U	not G
V	A, C, G	not T, not U
N	A, C, G, T, U	Any base
X	Masked	
. or -	Gap	Gap of indeterminate length

Table 2: IUPAC amino acid code

IUPAC amino acid code	Three letter code	Amino acid	Comment
A	Ala	Alanine	丙氨酸
B	Asx	Aspartic acid or Asparagine	天冬氨酸, 天冬酰胺
C	Cys	Cysteine	半胱氨酸
D	Asp	Aspartic Acid	天冬氨酸
E	Glu	Glutamic Acid	谷氨酸
F	Phe	Phenylalanine	苯丙氨酸
G	Gly	Glycine	甘氨酸
H	His	Histidine	组氨酸
I	Ile	Isoleucine	异亮氨酸
K	Lys	Lysine	赖氨酸
L	Leu	Leucine	亮氨酸
M	Met	Methionine	甲硫氨酸
N	Asn	Asparagine	天冬酰胺
O	Pyl	Pyrrolysine	吡咯赖氨酸
P	Pro	Proline	脯氨酸
Q	Gln	Glutamine	谷氨酰胺
R	Arg	Arginine	精氨酸
S	Ser	Serine	丝氨酸
T	Thr	Threonine	苏氨酸
U	Sec	Selenocysteine	硒代半胱氨酸
V	Val	Valine	缬氨酸
W	Trp	Tryptophan	色氨酸
X	Xaa	Any amino acid	
Y	Tyr	Tyrosine	酪氨酸
Z	Glx	Glutamic acid or Glutamine	谷氨酸, 谷氨酰胺
*		Translation stop	
-		Gap of indeterminate length	