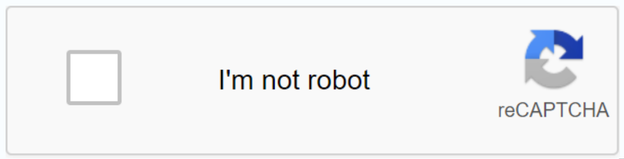

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Amino acid chart key

GGlycineGly PProlinePro AAlanineAla VValiinVal LLeucineLeu IIsoleutsiinIle MMetioniinMetTsüstentüül-tsüsteinecys FPhenylalaninePhe YTyrosineTyr WTryptophanTrp HHistidin EHis KLysineLys RArginineArg QGlutamineGln NAsparagineAsn EGlutamic AcidGlu DAsparaic AcidAsp SSerineSer TThreonineThr Aminohapete struktuurid on näidatud pöördel. 2) Järgmine töö Esimene täht rida, sobitada teise baasi Teine täht veerg, rakud on esitatud must, punane, sinine või roheline. CodonFull NameAbbreviation (3 Letter)Abbreviation (1 Letter) TTTPhenylalaninePheF TTCPhenylalaninePheF TTALeucineLeuL TTGLeucineLeuL TCTSerineSerS TCCSerineSerS TCASerineSerS TCGSerineSerS TATTyrosineTyrY TACTyrosineTyrY TAATermination (ochre)TerX TAGTermination (amber)TerX TGTCysteineCysC TGCCysteineCysC TGATermination (opal or umber)TerX TGGTryptophanTrpW CTTLeucineLeuL CTCLeucineLeuL CTALeucineLeuL CTGLeucineLeuL CCTProlineProP CCCProlineProP CCAProlineProP CCGProlineProP CATHistidineHisH CACHistidineHisH CAAGlutamineGlnQ CAGGlutamineGlnQ CGTArginineArgR CGCArginineArgR CGAArginineArgR CGGArginineArgR ATTIsoleucineIleI ATCIsoleucineIleI ATAIsoleucineIleI ATGMethionineMetM ACTThreonineThrT ACCThreonineThrT ACAThreonineThrTACGThreonineThrT AATAsparagineAsnN AACAsparagineAsnN AAALysineLysK AAGLysineLysK AGTSerineSerS AGCSerineSerS AGAArginineArgR AGGArginineArgR GTTValineValV GTCValineValV GTAValineValV GTGValineValV GCTAlanineAlaA GCCAlanineAlaA GCAAlanineAlaA GCGAlanineAlaA GATAspartateAspD GACAspartateAspD GAAGlutamateGluE GAGGlutamateGluE GGTGlycineGlyG GGCGlycineGlyG GGAGlycineGlyG GGGGlycineGlyG n/aAspartate or Asparaginen/aB n/aGlutamate or Glutaminen/aZ The amino acids, symbols, and codons Amino acids Symbols Codons Alanine Ala A GCA, GCC, GCG, GCU Cysteine Cys C UGC, UGU Aspartic acid Asp D GAC, GAU Glutamic acid Glu E GAA , GAG Phenylalaalan Phe F UUC, UUU Glycine GGA, GGC, GGG, GGU Histidine Tema H CAC, CAU Isoleutsiin Ile I AUA, AUC, AUU Lüsine Lys K AAA, AAG Leucine Leu L UUA, UUG, CUA, CUC, CUU Methionine Met M AUG Asparagine Asn AAC, AAU Proline Pro P CCA, CCC, CCG, CCU glutamiini gln Q CAA, CAG Arginine Arg R AGA, AGG, CGA, CGC, CGU Serine Ser S AGC, AGU, UCA, UCC, UCG, UCU Threonine Thr TA, ACC, ACG , ACU Valine Val V GUA, GUC, GUG, GUU Tryptophan TRP W UGG Türosiini Tyr Y UAC UAU Nukleotiidi baasi koodid, mida kasutatakse koos Rahvusvahelise Nukleotiidi jada andmebaas on järgmine. Järjestusandmeid väljendatakse ainult väikeste tähtedega. Suurtäht teisendatakse automaatselt väiketäheks. Sümbol Tähendus Selgitus adeniin c c c cytosine g guanine t t thymine in DNA; uratsiil rna m a või c amino r a or g purine w a or t s c or g y c või t pyrimidiin k g või t keto v a or c või g või g not g d a or g või t not c c c or g või t not t not n a or c or g or g või t Line. Example FEATURES Location/Qualifiers modified_base 15 /mod_base=m2g Abbreviation Modified base description ac4c 4-acetylcytidine chm5u 5-(carboxyhydroxylmethyl)uridine cm 2'-O-methylcytidine cmnm5s2u 5-carboxymethylaminomethyl-2-thiouridine cmnm5u 5-carboxymethylaminomethyluridine dhu dihydrouridine fm 2'-O-methylpseudouridine gal q beta,D-galactosylqueuosine gm 2'-O-methylguanosine i inosine i6a N6-isopentenyladenosine m1a 1-methyladenosine m1f 1-methylpseudouridine m1g 1-methylguanosine m1i 1-methylinosine m22g 2,2-dimethylguanosine m2a 2-methyladenosine m2g 2-methylguanosine m3c 3-methylcytidine m4c N4-methylcytosine m5c 5-methylcytidine m6a N6-methyladenosine m7g 7-methylguanosine mam5u 5-methylaminomethyluridine mam5s2u 5-methoxyaminomethyl-2-thiouridine man q beta,D-mannosylqueuosine mcm5s2u 5-methoxycarbonylmethyl-2-thiouridine mcm5u 5-methoxycarbonylmethyluridine mo5u 5-methoxyuridine ms2i6a 2-methylthio-N6-isopentenyladenosine ms2t6a N-((9-beta-D-ribofuranosyl-2-methyltiopurin-6-yl)carbamoyl)threonine mt6a N-((9-beta-D-ribofuranosylpurine-6-yl)N-methyl-carbamoyl)threonine mv uridine-5-oxyacetic acid methylester o5u uridine-5-oxyacetic acid (v) osyw wybutoxosine p pseudouridine q queuosine s2c 2-thiocytidine s2t 5-methyl-2-thiouridine s2u 2-thiouridine s4u 4-thiouridine m5u 5-methyluridine t6a N-((9-beta-D-ribofuranosylpurine-6-yl)carbamoyl)threonine tm 2'-O-methyl-5-methyluridine um 2'-O-methyluridine yw wybutosine x 3-(3-amino-3-carboxypropyl)uridine , (acp3)u OTHER (/note specifying に修飾塩a記載adす) [References] Amino acid code used in combination with the international nucleotide sequencing database is as follows. These amino acids are described in the translation qualifier for the CDS function with a single letter abbreviation. The abbreviations of the amino acids listed are legal values for transl_except/anticodon. For those that are not included in amino acid codes, please check out modified and unusual amino acids. Abbreviation 1-letter abbreviation Amino acid Name Ala A Alannine Arg Arginine Asn N Asparagine Asp D Asparaic acid Cysteine Gln Q Glutamine Glu E Glutamic Acid Glycine His H Histidine Ile I Isoleucine Leu Lutsin Lys K Lysine Met M Methionine Phe FMethionine Phe E Serine Sec U Selenocysteine Thr TThreonine Trp W Tryptophan Tyrosine Val V Valine Asx B Aspartic acid or asparagiinglx Z Glutamic acid or glutamine Xaa X Amino acid Xle JLeutin or Isoleucine TERM termination codon [References] For other amino acids not included in amino acid codes, the abbreviation listed below is used. All of these amino acids are described as a single-letter abbreviation for X/translation qualifier CDS function. Abbreviation for amino acids Aad 2-aminoadipic acid bAad 3-aminoadipic acid bAla beta-alanine, beta-aminoproprionic acid Abu Acid 4Abu-aminobutyric acid, piperidic acid Aqueous 6-aminocaproic acid Ahe 2-aminohepthane acid Aib 2-aminoisobutyric acid bAb 3-aminoisolylic acid Apm 2-aminopimeyl acid Dbu 2,4-diaminobutyl acid Des Desmosine Dpm 2,2'-diaminoic acid Dpr 2,3-diaminoproprionic acid EtGly N-ethyl glycineAsn N-ethylasparagine Hyl Hydroxylyzin-aHyl-hydroxylysine 3Hyp 3-hydroxyproline 4Hyp 4-hydroxyproline ide isodesmosisine aIle allo-isoleucinemeGly N-methylglycin, Sarcoidin MeIle N-Methylisoleucine MeLys 6-N-MethyllysininMeVal N-Methylvaline Nvaline Nle Norleucine Orn Ornithine Other ((amino acid, which is not included in this list should be described as /note qualifier) [References] Amino acids are the backbone of peptides and proteins. All amino acids contain both amino and carboxylic acids and, in some cases, side chains. The properties of amino acids are determined by functional substitutes associated with the side circuits, which are most commonly called R-groups. In the amino acid chart listed here, we describe the 20 standard residues found in nature with universal genetic codes. A new update to genscript, a trusted peptide service, is ready to speed up your research! You can contact the S-e peptide@genscript.com any technical support. Name 3-Letter Symbol 1-Letter Symbol Formula Molecular Weight Isoelectric Point Structure Alanine ALA A C3H7N1O2 89.09 6.00 Isoleucine ILE I C6H13N1O2 131.17 5.94 Leucine LEU L C6H13N1O2 131.17 5.98 Valine VAL V C5H11N1O2 117.15 5.96 Name 3-Letter Symbol 1-Letter Symbol Formula Molecular Weight Isoelectric Point Structure Phenylalanine PHE F C9H11N1O2 165.19 5.48 Tryptophan TRP W C11H12N2O2 204.23 5.89 Tyrosine TYR Y C9H11N1O3 181.19 5.66 Name 3-Letter Symbol 1-Letter Symbol Formula Molecular Weight Isoelectric Point Structure Asparagine ASN N C4H8N2O3 132.12 5.41 Cysteine CYS C C3H7N1O2S1 121.16 5.02 Glutamine GLN Q C5H10N2O3 146.15 5.65 Methionine MET M C5H11N1O2S1 149.21 5.74 Serine SER S C3H7N1O3 105.09 5.68 Threonine THR T C4H9N1O3 119.12 5.64 Name 3-Letter Symbol 1-Letter Symbol Formula Molecular Weight Isoelectric Point Structure Arginine ARG R C6H14N4O2 174.2 11.15 Histidine HIS H C6H9N3O2 155.16 7.47 Lysine LYS K C6H14N2O2 146.19 9.59 Name 3-Letter Symbol 1-Letter Symbol Formula Molecular Weight Isoelectric Point Structure Astermic acid ASP D C4H7N1O4 133.1 2.77 Glutamic acid GLUE E C5H9N1O4 147.13 3.22 Name 3-letter symbol 1-letter symbol Formula Molecular mass Iso Electrical Point Structure Glycine GLY G C2H5N1O2 75.07 5.97 Proline PRO P C5H9N1O2 115.13 6.30 Reliable peptide service New innovation GenScript is ready to accelerate your research! You can contact the S-e peptide@genscript.com any technical support. Amino Acid Explorer Learn PagePSSM ViewerKey Symbols Description Displayed DataMutation Analyzer Questions or Comments Area amino acidAdetected protein 1875, 30 % of the residues in silk. Its low reactivity contributes to the simple elongated structure of silk, which has few cross-ties that give the fibres strength, stretch resistance and flexibility. Only i-stereoinomer is involved in the biosynthesis of proteins. Cowardly amino acidInthines are produced in humans when proteins are excreted. It can then be modified with nitric oxide in the human body, a chemical that is known to relax blood vessels. Arginine has been reported for the treatment of people with chronic heart failure, high cholesterol, circulatory disorder and high blood pressure due to their vasodilatory effects, although studies on these fronts are still ongoing. Arginine can also be produced synthetically, and arginine-related compounds can be used to treat people with liver dysfunction due to their role in promoting liver regeneration. Although arginine is needed for growth but not body care, studies have shown that arginine is important for wound healing, especially for those with circulatory problems. Asn amino acid1806 was purified from asparagus juice, making it the first amino acid to be isolated from a natural source. However, it wasn't until 1932 that scientists were able to prove that asparagine was present in proteins. Only i-stereoinone is involved in the biosynthesis of mammalian proteins. Asparagine is important for removing toxic ammonia from the body. Asp amino acidDetected proteins in 1868, aspartiinic acid is commonly found in animal proteins, but only l-stereoinone is involved in the biosynthesis of proteins. The solubility of this amino acid in water is close to enzymes such as pepsin. Cys amino acids in cysteine are particularly rich in proteins in hair, slings, and keratin skin, having separated urinary tract calculus in 1810 and horn in 1899. It was then chemically synthesized and, between 1903 and 1903, it was synthesized. Two cysteine molecules, which are related to the disulfide relationship, form the amino acid cysteine, which is sometimes listed separately in the commonly used amino acid lists. Cystine is made from serine and methionine in the body and is present only in the l-stereoisomer of mammalian proteins. People with the genetic condition cystinuria are unable to effectively reabsorb cystine into their bloodstream. Consequently, high levels of cystine accumulate in your urine, where it crystallizes and forms stones that block the kidneys and bladder. Gln aminoacidGlutamine was first separated from beet juice in 1883. chemically synthesized next year. Glutamine is the richest amino acid in our body and performs a number of important functions. Glutamic acid is synthesized in humans and this conversion phase is vital for regulating toxic ammonia levels in the body, forming urea and purines. Glu amino acidGluamic acid was separated from wheat gluten in 1866 α. The monosodium salt of L-glutamic acid, sodium glutamate (MSG) is usually used as a seasoning and flavour enhancer. Glutamic acid carboxylic chain is capable of acting as a donor and accepting of ammonia, which is toxic to the body, allowing the safe transport of ammonia to the liver when it becomes urea and is excreted by the kidneys. Free glutamic acid can also degrade carbon dioxide and water or around sugars. Gly amino acidGly was the first amino acid isolated from protein, in this case gelatin, and is the only one that is not optically active (no d- or l-stereoisomer). Structurally the easiest α-amino acids, it is very reactive when added to proteins. Even so, glycine is an important biosynthesis of amino acids serine, coenzyme glutathione, purines and heme, an important part of hemoglobin. His amino acidHistidine was separated in 1896. Histidine is a direct precursor to histamine and an important source of carbon in the synthesis of purine. When added to proteins, histidine side chain can act as a proton and donor, transmitting important properties when combining enzymes such as chymotrypsin and those involved in the metabolism of carbohydrates, proteins and nucleic acids. In infants, histidine is considered an essential amino acid, adults are able to go for a short time without dietary intake, but are still considered important. Ileaminoic acidIoleucine was separated from beet sugar molasses in 1904. The hydrophobic nature of the by-loop is essential for determining the structure of the third level of proteins to which it belongs. Those with a rare hereditary disease, called maple syrup urinary disease, have a faulty enzyme breaking down pathway of the common isoleucine, leucine, and valine. Without treatment, metabolites accumulate in the patient's urine, which contributes to the distinctive smell, which gives the condition its name. Leu aminoacidLecine was separated from cheese in 1819 and was synthesized in the laboratory in 1820. Mammalian light occurs only in l-stereoinone, which can be broken down into simpler compounds Some DNA binding proteins contain areas where leucines are placed in configurations called leucine zippers. Lys aminoacidLysine was first extracted from the milk protein casein in 1889 and its structure was explained in 1902. Lysine is important for binding enzymes into coenzymes and plays an important role in both histones function. Many cereal crops are very low for lysine, which has led to shortages in some populations, which are highly dependent on both food and vegetarian and low-fat dieters. Consequently, efforts have been made to develop lysine-rich maize strains. Met aminoacidMethionine was extracted from the milk protein casein in 1922. Associated with its sulphur content, methionine helps prevent fat build-up in the liver, and helps detoxify metabolic waste and toxins. Methionine is the only essential amino acid that does not occur in significant amounts of soybeans and is therefore produced commercially and added to many soybean products. Phe amino acidPhenylalanine was first extracted from a natural source (lupine sprouts) in 1879 and then chemically synthesized in 1882. The human body is usually able to break down phenylalanine into tyrosine, but individuals with an inherited condition phenylketonuria (PKU), an enzyme that makes this conversion lacks action. Untreated phenylalanine builds in the blood causing retarded mental development in children. In 10,000 children born with the condition, against low levels of phenylalanine in early life can alleviate the effects. Pro amino acid1900. The following year, it was extracted from the casein of the milk protein and its structure proved to be the same. Humans may synthesize proline from glutamic acid, which only occurs as l-stereoisomeamina of mammalian proteins. When the proline is added to the proteins, its peculiar structure leads to sharp curves, or ved, peptide chain, helping significantly the protein's final structure. Proline and its derivatives hydroxyproline account for 21 % amino acid residues of fibrous protein collagen, an important connective tissue. Ser aminoacidSerin was first separated from the silk protein in 1865, but its structure was not established until 1902. Humans may synthesizeeriarin from other metabolites, including glycine, although only l-stereoinomer is present in mammalian proteins. Serine is an important biosynthesis of many metabolites and is often important for the catalytic function of the enzymes in which it is added, including chymotrypsysin and trypsin. Nerve gases and some insecticides work by combining it with serine residue at the active site of acetylcholine esterase, enzyme completely. Esterase activity is essential for the degradation of the neurotransmitter acetylcholine, otherwise dangerously high levels are formed, leading to seizures and death. Thr amino acidReonin was separated from fibrin in 1935. Mammalian proteins only have mammalian proteins, where it is relatively unresponsive. Although important in many reactions to bacteria, its metabolic role in higher animals, including humans, remains unclear. Trp amino acid Isolated casein (milk protein) in 1901. Bacteria that break down in the human gut diet to tptophan, releasing compounds such as skatole and indole that give feces their unpleasant aroma. Tryptophan is converted into vitamin B3 (also called nicotinic acid or thiacin), but not enough to keep us healthy. Consequently, we also need to swallow vitamin B3, failure to do so leads to a deficiency called pellagra. Tyr amino acid 1846 tyrosine was separated from the breakdown of casein (cheese protein), after which it was synthesized in the laboratory and its structure determined in 1883. Only i-stereoisomerian mammalian proteins are found in people who synthesize phenylalanine tyrosine. Tyrosine is an important precursor to adrenal hormones adrenaline and norepinephrine, thyroid hormones including thyroxine and hair and skin pigment melanin. In enzymes, tyrosine residues are often associated with active locations, which may alter the specificity of the enzyme or completely destroy the action. Suffering from a serious genetic condition phenylketonuria (PKU) is unable to convert phenylalanine tyrosine, while patients with alcaptonuria have defective tyrosine metabolism, which produces distinctive urine that darkens when exposed to air. Val amino acidValin structure was established in 1906. Mammalian light is only i-stereoisomer. Valine may break down into simpler compounds in the body, but in people with a rare genetic disease called maple syrup urine disease, a faulty enzyme interrupts this process and can be fatal if left untreated. Rough.