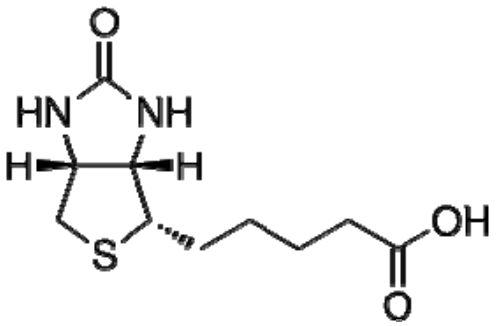
D-Biotin

CAS Number: 58-85-5

Storage Temperature: 2-8℃

Product Number: D38580



Product Description :

Appearance: white to off-white crystalline powder

Molecular formula: C10H16N2O3S

Molecular weight: 244.31

Synonyms: Vitamin H; Coenzyme R; Bioepiderm

Biotin is used as a growth factor in mammalian cell culture as well as having numerous immunological purification roles in avidin/streptavidin-biotin binding mechanisms. Biotin, also known as vitamin H or B7, is a water-soluble B-complex vitamin which is composed of an ureido (tetrahydroimidizalone) ring fused with a tetrahydrothiophene ring. A valeric acid substituent is attached to one of the carbon atoms of the tetrahydrothiophene ring. Biotin is a cofactor in the metabolism of fatty acids and leucine, and it plays a role in gluconeogenesis. Biotin is necessary for cell growth, the production of fatty acids, and the metabolism of fats and amino acids. It plays a role in the citric acid cycle, which is the process by which biochemical energy is generated during aerobic respiration. Biotin not only assists in various metabolic reactions, but also helps to transfer carbon dioxide. Biotin is also helpful in maintaining a steady blood sugar level. Biotin is often recommended for strengthening hair and nails. Consequently, it is found in many cosmetic and health products for the hair and skin. Deficiency is extremely rare, as intestinal bacteria generally produce an excess of the body's daily requirement.

Preparation Instructions:

Biotin is not very soluble (0.02g/100ml of hot dH2O and in 95% alcohol ~80mg/100ml at 25°C). Routine solubility assays yield 50mg/ml in 2M NH4OH. Biotin can be dissolved in dimethylformamide (DMF) at a concentration of 1.7mg/ml; 1ml of this can then added dropwise to 5ml of sodium potassium phosphate buffered saline, pH 6.8. For cell culture purposes, either HCl or NaOH may be used to titrate biotin into solution. Biotin is stable at 100°C in moderately acid or neutral aqueous solutions; the solutions can be heat-sterilized. Solutions above pH 9 are less stable. Moderately acid and neutral solutions are stable several months.

Storage/Stability:

Store powder desicated and sealed at 4°C. Powder is stable for 12 months with proper conditions. Store liquid at 4°C.