(-)-Riboflavin
Cell Culture Tested

Product Code: TC167

Product Description:
Molecular Weight: 376.36
Molecular Formula: C_{17}H_{20}N_{4}O_{6}
CAS No.: 83-88-5
Synonym: Vitamin G, Vitamin B2

Riboflavin, also known as vitamin B2, is a water soluble vitamin belonging to vitamin B group. It is the central cofactor of components of FAD and FMN and therefore required by flavoproteins and for cellular processes. Riboflavin is important for wide range of metabolic reactions including oxidases and dehydrogenases. It provides protection against oxidative damage. It binds important macromolecules such as serum albumin in cell culture. As a prosthetic group of flavoproteins it facilitates the transfer of electrons and hydrogen atoms towards the reduction of oxygen.

Riboflavin exists in three major forms:
Non-phosphorylated riboflavin: It is the vitamin form most frequently used in medium formulations
Riboflavin- 5' phosphate (FMN): It functions as a prosthetic group in some flavoproteins.
Flavin adenine dinucleotide (NAD): Riboflavin delivered to the liver as FMN is incorporate into flavoproteins or further metabolized to FAD and then incorporated into flavoproteins.

Quality Control:
Appearance
Yellow to orange powder.
Solubility
Yellow solution at 1mg in 100ml of water.
\[ \text{pH of 0.001\% solution in water} \]
5.00 -7.00
Specific optical rotation \([\alpha]_b^{20}\)
-115° to -135°
Lumiflavin
Absorbance at 440nm is NMT 0.025%
Residue on Ignition
NMT 0.3%
Loss on drying (105°C; 1 h)
NMT 1.5%
Assay
NLT 98.00%
Cell Culture Test
Passes

Storage and Shelf Life:
Store below 30°C,
Shelf life is 36 months.
Use before expiry date given on the product label.

Disclaimer:
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