Natural Products

ChemFaces

4-Hydroxyisoleucine Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: 4-Hydroxyisoleucine

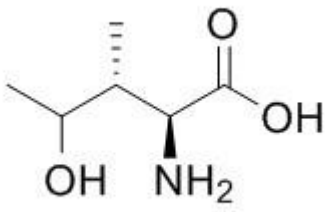
Catalog No.: CFN99721

Cas No.: 781658-23-9

Purity: >=98%

M.F: $C_6H_{13}NO_3$

M.W: 147.17



Physical Description: Powder

Synonyms: (2S,3R)-2-Amino-4-hydroxy-3-methylpentanoic acid.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[Source]

The seeds of *Trigonella foenum-graecum L.*

[Biological Activity or Inhibitors]

4-Hydroxyisoleucine is a new insulinotropic compound has insulinotropic activity, which

may, at least in part, account for fenugreek seeds' antidiabetic properties.[1]

4-Hydroxyisoleucine has antidyslipidemic and antihyperglycemic effects.[2]

4-Hydroxyisoleucine as a useful and well-tolerated treatment for insulin resistance, both directly as a hypoglycaemic and also as a protective agent for the liver. [3]

4-Hydroxyisoleucine shows antidepressant-like effects in animal models of depression by brain serotonin turnover enhancement.[4]

4-Hydroxyisoleucine has beneficial effects on low-grade inflammation, it can reverse the insulin resistance by the activation of AMPK and suppression of SOCS-3 coimmunoprecipitation with both the IR-β subunit as well as IRS-1.[5]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method][6]

Mobile phase: Methanol-0.5 M Sodium acetate,gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 340 nm.

[Storage]

2-8℃, Protected from air and light, refrigerate or freeze.

[References]

[1] Sauvaire Y, Petit P C, Manteghetti M, *et al. Diabetes, 1998, 47(2):206-10.*

[2] Narender T, Puri A S, Khaliq T, *et al. Bioorg. Med. Chem. Lett., 2006, 37(16):293-6.*

[3] Haeri M R, Izaddoost M, Ardekani M R S, *et al. Phytother. Res.,2009, 23(1):61-4.*

[4] Gaur V, Bodhankar S L, Mohan V, *et al. Biomed. Aging Pathol., 2012, 2(3):121-5.*

[5] Gautam S, Ishrat N, Yadav P, *et al. Mol. Cell Biochem.,2016, 414(1-2):95-104.*

[6] Li B, Zeng G Y, Tan J B, *et al. Central South Pharmacy, 2009, 7(4):277-9.*

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