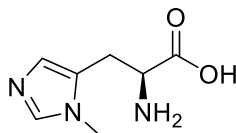


3-Methyl-L-histidine

Code No.: **BIA-H2174**

Pack sizes: **5 mg, 25 mg**



Synonyms : (2S)-2-Amino-3-(1-methyl-1H-imidazol-5-yl)propanoic acid, 3-Methylhistidine, 3-N-Methyl-L-histidine

Specifications

CAS #	: 368-16-1
Molecular Formula	: C₇H₁₁N₃O₂
Molecular Weight	: 169.18
Source	: Synthetic
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in methanol or DMSO

Application Notes

3-Methyl-L-histidine is an L-histidine derivative substituted by a methyl group at position 3 on the imidazole ring. 3-Methyl-L-histidine is an endogenous human metabolite and is also produced by *Saccharomyces cerevisiae*. 3-Methyl-L-histidine is formed by methylation of histidine as a posttranslational modification of actin and myosin. 3-Methyl-L-histidine is more abundant in myosin from white skeletal muscle than from myosin of red skeletal and smooth muscle. 3-Methyl-L-histidine is a product of the degradation of myofibrillar proteins.

References

1. Biological activity and the 3-methylhistidine content of actin and myosin. Johnson P. and Perry S.V. *Biochem J.* 1970, 119, 293.
2. Plasma N tau-methylhistidine concentration is a sensitive index of myofibrillar protein degradation during starvation in rats. Nagasawa T. et al. *Biosci Biotechnol Biochem.* 1996, 60, 501.
3. Comparison between 3-methylhistidine production and proteinase activity as measures of skeletal muscle breakdown in protein-deficient growing barrows. Van den Hemel-Grooten H.N.A. et al. *J Animal Sci.* 1995, 73, 2272.