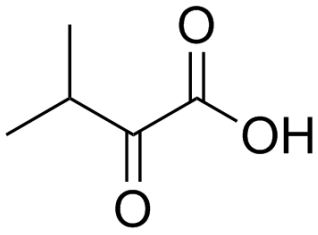
3-Methyl-2-oxobutanoic acid

Cat. No.:	HY-W006057
CAS No.:	759-05-7
Molecular Formula:	$C_5H_8O_3$
Molecular Weight:	116.12
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Pure form -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	3-Methyl-2-oxobutanoic acid is a precursor of pantothenic acid in Escherichia coli.
IC_{50} & Target	Human Endogenous Metabolite
In Vitro	3-Methyl-2-oxobutanoic acid (alpha-Ketoisovaleric acid) is a precursor of pantothenic acid in Escherichia coli[1]. 3-Methyl-2-oxobutanoic acid (alpha-Ketoisovaleric acid) enhances alpha-ketoisocaproic acid and alpha-keto-beta-methyl-n-valeric acid, but diminishes the corresponding amino acids, and causes an early decline of ornithine along with a late augmentation of plasma arginine[2].
In Vivo	3-Methyl-2-oxobutanoic acid (alpha-Ketoisovaleric acid) induces convulsions through GABAergic and glutamatergic mechanisms in rats[3].

REFERENCES

[1]. MAAS WK, et al. alpha-Ketoisovaleric acid, a precursor of pantothenic acid in Escherichia coli. J Bacteriol. 1953 Apr;65(4):388-93.

[2]. Schauder P, et al. Oral administration of alpha-ketoisovaleric acid or valine in humans: blood kinetics and biochemical effects. J Lab Clin Med. 1984 Apr;103(4):597-605.

[3]. Coitinho AS, et al. Pharmacological evidence that alpha-ketoisovaleric acid induces convulsions through GABAergic and glutamatergic mechanisms in rats. Brain Res. 2001 Mar 9;894(1):68-73.

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