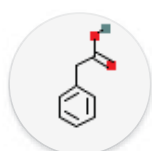
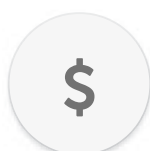



 Compound Summary for CID 999

Phenylacetic Acid

[► Cite this Record](#)


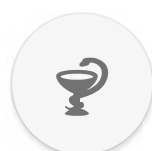
STRUCTURE



VENDORS



DRUG INFO



PHARMACOLOGY



LITERATURE



PATENTS



BIOACTIVITIES

PubChem CID:	999
Chemical Names:	PHENYLACETIC ACID; 2-Phenylacetic acid; Benzeneacetic acid; 103-82-2; Phenylethanoic acid; Alpha-Toluic acid More...
Molecular Formula:	C ₈ H ₈ O ₂ ; C ₆ H ₅ CH ₂ CO ₂ H
Molecular Weight:	136.15 g/mol
InChI Key:	WLJVXDMOQOGPHL-UHFFFAOYSA-N
Drug Information:	Drug Indication Clinical Trials FDA UNII
Safety Summary:	Laboratory Chemical Safety Summary (LCSS)

Phenylacetic acid is a [Nitrogen Binding Agent](#). The mechanism of action of phenylacetic acid is as an [Ammonium Ion Binding Activity](#).

[► FDA Pharmacology Summary from FDA Pharm Classes](#)

[Phenyl acetate](#) (or [phenylacetate](#)) is a carboxylic acid ester that has been found in the biofluids of patients with nephritis and/or hepatitis as well as patients with phenylketonuria (PKU), an inborn error of metabolism. Excess [phenylalanine](#) in the body can be disposed of through a transamination process leading to the production of [phenylpyruvate](#). The [phenylpyruvate](#) can be further metabolized into a number of products. Decarboxylation of [phenylpyruvate](#) gives [phenylacetate](#), while a reduction reaction gives phenyllactate. The [phenylacetate](#) can be further conjugated with [glutamine](#) to give phenylacetyl glutamine. All of these metabolites can be detected in serum and urine of PKU patients. [Phenyl acetate](#) is also produced endogenously as the metabolite of [2-Phenylethylamine](#), which is mainly metabolized by monoamine oxidase to form [phenyl acetate](#). [2-phenylethylamine](#) is an "endogenous [amphetamine](#)" which may modulate central adrenergic functions, and the urinary [phenyl acetate](#) levels have been postulated as a marker for depression. (PMID: [17978765](#), [476920](#), [6857245](#)). [Phenylacetate](#) is also found in essential oils, e. g. neroli, rose oil, free and as esters' and in many fruits. As a result it is used as a perfumery and flavoring ingredient.

[► Metabolite Description from Human Metabolome Database \(HMDB\)](#)

8/16/2018

Phenylacetic acid | C8H8O2 - PubChem

[PUBCHEM](#) > [COMPOUND](#) > PHENYLACETIC ACID

Modify Date: 2018-08-15; Create Date: 2004-09-16

Contents

1 2D Structure

2 3D Conformer

3 Names and Identifiers

4 Chemical and Physical Properties

5 Related Records

6 Chemical Vendors

7 Drug and Medication Information

8 Food Additives and Ingredients

9 Pharmacology and Biochemistry

10 Use and Manufacturing

11 Identification

12 Safety and Hazards

13 Toxicity

14 Literature

15 Patents

16 Biomolecular Interactions and Pathways

17 Biological Test Results

18 Classification

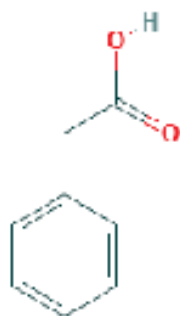
19 Information Sources

1 2D Structure

 Search

 Download

 Get Image




 Magnify

▸ *from PubChem*

2 3D Conformer

 Search

 Download

 Get Image

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