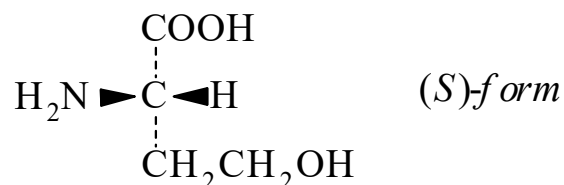




>>Entry Name: 2-Amino-4-hydroxybutanoic acid

ENTRY UNDER REVIEW

Synonym(s): Homoserine, 9CI



CAS Registry Number: 498-19-1

Related CAS Registry Numbers(s): 53949-21-6 55596-53-7

Molecular Formula: $\text{C}_4\text{H}_9\text{NO}_3$

Molecular Weight: 119.12

Accurate Mass: 119.058244

Percentage Composition: C 40.33%; H 7.62%; N 11.76%; O 40.29%

>>Variant: (*R*)-form

Synonym(s): D-form

CAS Registry Number: 6027-21-0

Molecular Formula: $\text{C}_4\text{H}_9\text{NO}_3$

Molecular Weight: 119.12

Accurate Mass: 119.058244

Percentage Composition: C 40.33%; H 7.62%; N 11.76%; O 40.29%

Physical Description: Cryst. (EtOH aq.)

Melting Point: Mp 203 dec.°

Optical Rotation: $[\alpha]_{\text{D}}^{20} +9$ (c, 2 in H_2O)

Aldrich: 37796-1

Fluka: 53595

Sigma: H4021

>>Derivative: *N*-Benzoyl

Molecular Formula: $\text{C}_{11}\text{H}_{13}\text{NO}_4$

Molecular Weight: 223.228

Accurate Mass: 223.084459

Percentage Composition: C 59.19%; H 5.87%; N 6.27%; O 28.67%

Physical Description: Cryst. (H_2O)

Melting Point: Mp 139-140°

Optical Rotation: $[\alpha]_{\text{D}}^{23} +28$ (c, 1 in 95% EtOH)

>>Variant: (*S*)-form

Synonym(s): L-form

CAS Registry Number: 672-15-1

Molecular Formula: $\text{C}_4\text{H}_9\text{NO}_3$

Molecular Weight: 119.12

Accurate Mass: 119.058244

Percentage Composition: C 40.33%; H 7.62%; N 11.76%; O 40.29%

Biological Source: Present in germinating peas, Jack bean seeds (*Canavalia ensiformis*) and the seedlings of many leguminous plants

Use/Importance: Intermediate in the conversion of Aspartic acid [HJB19-Y](#) into 2-Amino-4-mercaptobutanoic acid [BDD92-V](#) and α -ketobutyrate in microbia and fungi

Melting Point: Mp 203 dec.°

Optical Rotation: $[\alpha]_{\text{D}}^{26} -8.8$ (c, 5 in H_2O)

Aldrich: 21978-9

Fluka: 53600

Sigma: H1126

>>Derivative: *N*-Benzyloxycarbonyl, benzyl ester

Physical Description: Cryst. (Et_2O /petrol)

Melting Point: Mp 52-57°

Optical Rotation: $[\alpha]_{\text{D}}^{25} 0$ (c, 0.976 in CHCl_3)