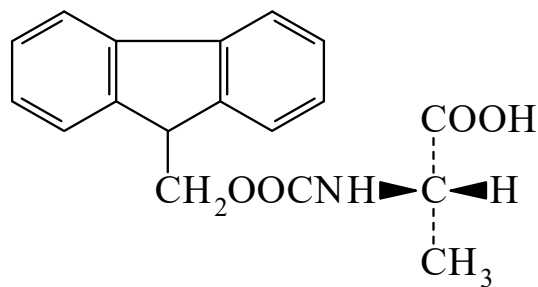




>>Entry Name: Fluorenylmethylenoxycarbonylalanine

Synonym(s): *N*-[(9*H*-Fluoren-9-ylmethoxy)carbonyl]alanine, 9Cl. FmocAlaOH



Molecular Formula: C₁₈H₁₇NO₄

Molecular Weight: 311.337

Accurate Mass: 311.115759

Percentage Composition: C 69.44%; H 5.50%; N 4.50%; O 20.56%

General Statement: Deriv. of 9-Fluorenyl methyl chloroformate [DMJ03-G](#)

>>Variant: L-form

CAS Registry Number: 35661-39-3

Molecular Formula: C₁₈H₁₇NO₄

Molecular Weight: 311.337

Accurate Mass: 311.115759

Percentage Composition: C 69.44%; H 5.50%; N 4.50%; O 20.56%

Melting Point: Mp 144-145°

Optical Rotation: $[\alpha]_{\text{D}}^{28} -3.48$ (c, 2.5 in EtOAc)

Fluka: 47616

Sigma: F6888

>>Derivative: *tert*-Butyl ester

Synonym(s): FmocAlaOBu^{*t*}

CAS Registry Number: 71953-00-9

Melting Point: Mp 84-85°

Optical Rotation: $[\alpha]_{\text{D}}^{25} +1$ (c, 2 in CHCl₃)

>>Derivative: Piperidyl ester

Synonym(s): FmocAlaOPip

CAS Registry Number: 35820-67-8

Melting Point: Mp 48-50°

Optical Rotation: $[\alpha]_{\text{D}} +4.65$ (c, 2.5 in EtOAc)

>>Derivative: 4-Nitrophenyl ester

Synonym(s): FmocAlaONp

CAS Registry Number: 71989-13-4

Melting Point: Mp 166-167°

Optical Rotation: $[\alpha]_{\text{D}}^{22} -41.5$ (c, 1-2 in DMF + 1% AcOH)

>>Derivative: Fluoride

CAS Registry Number: 130858-92-3

Molecular Formula: C₁₈H₁₆FNO₃

Molecular Weight: 313.328

Accurate Mass: 313.111422

Percentage Composition: C 69.00%; H 5.15%; F 6.06%; N 4.47%; O 15.32%

Use/Importance: Used in peptide synthesis

Melting Point: Mp 111-112°

Optical Rotation: $[\alpha]_{\text{D}}^{23} +3.6$ (c, 0.5 in EtOAc)

References:

Carpino, L.A. *et al.*, *J.O.C.*, 1972, **37**, 3404, (*synth, piperidyl*)

Chang, C.-D. *et al.*, *Int. J. Pept. Protein Res.*, 1980, **15**, 59, (*butyl ester*)

Bodanszky, M. *et al.*, *J.O.C.*, 1980, **45**, 72, (*nitrophenyl*)

Carpino, L.A. *et al.*, *J.A.C.S.*, 1990, **112**, 9651-9652, (*fluoride*)