



>>Entry Name: Fluorenylmethylenoxycarbonylvaline

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

Molecular Formula: C₂₀H₂₁NO₄

Molecular Weight: 339.39

Accurate Mass: 339.147059

Percentage Composition: C 70.78%; H 6.24%; N 4.13%; O 18.86%

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

>>Variant: L-form

CAS Registry Number: 68858-20-8

Molecular Formula: C₂₀H₂₁NO₄

Molecular Weight: 339.39

Accurate Mass: 339.147059

Percentage Composition: C 70.78%; H 6.24%; N 4.13%; O 18.86%

Melting Point: Mp 143-144°

Optical Rotation: [α]_D −16.1 (c, 1 in DMF)

Aldrich: 40867-0

Fluka: 47638

Sigma: F4508

>>Derivative: 2-Nitrophenyl ester

Synonym(s): FmocValONp

CAS Registry Number: 71989-42-9

Melting Point: Mp 111-112°

Optical Rotation: [α]_D −58.4 (c, 1.2 in 99:1 DMF/AcOH)

>>Derivative: Pentafluorophenyl ester

CAS Registry Number: 86060-87-9

Molecular Formula: C₂₆H₂₀F₅NO₄

Molecular Weight: 505.44

Accurate Mass: 505.131249

Percentage Composition: C 61.78%; H 3.99%; F 18.79%; N 2.77%; O 12.66%

Physical Description: Cryst. (EtOAc/hexane)

Melting Point: Mp 122-123°

Optical Rotation: [α]_D²⁰ −22 (c, 1 in CHCl₃)

>>Derivative: Fluoride

CAS Registry Number: 130858-93-4

Molecular Formula: C₂₀H₂₀FNO₃

Molecular Weight: 341.381

Accurate Mass: 341.142722

Percentage Composition: C 70.37%; H 5.90%; F 5.57%; N 4.10%; O 14.06%

Use/Importance: Used in peptide synthesis

Melting Point: Mp 113-114°

Optical Rotation: [α]_D²⁴ +10.7 (c, 1 in CH₂Cl₂)

References:

- Chang, C.-D. *et al.*, *Int. J. Pept. Protein Res.*, 1980, **15**, 59, (*synth*)
Bodanszky, A. *et al.*, *J.O.C.*, 1980, **45**, 72, (*nitrophenyl ester*)
Kisfaludy, G. *et al.*, *Synthesis*, 1983, 325, (*pentafluorophenyl ester*)
Carpino, L.A. *et al.*, *J.A.C.S.*, 1990, **112**, 9651-9652, (*fluoride*)