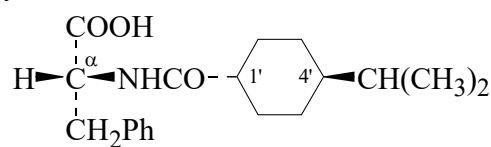




>>Entry Name: Nateglinide, BAN, INN, USAN

Synonym(s): *N*-[[4-(1-Methylethyl)cyclohexyl]carbonyl]phenylalanine, 9Cl. Fastic. Starlix. Starsis. A 4166. DJN 608



($\alpha R, 1'RS, 4'RS$)-form

CAS Registry Number: 105746-37-0

Related CAS Registry Numbers(s): 173653-89-9

Molecular Formula: C₁₉H₂₇NO₃

Molecular Weight: 317.427

Accurate Mass: 317.199094

Percentage Composition: C 71.89%; H 8.57%; N 4.41%; O 15.12%

Biological Use/Importance: Oral hypoglycaemic agent. Antidiabetic agent, stimulates insulin release in pancreatic β -cells

Other Data: Analogue of Meglitinide [BLB82-M](#)

>>Variant: ($\alpha R, 1'RS, 4'RS$)-form

Synonym(s): D-*trans*-form

CAS Registry Number: 105816-04-4

Molecular Formula: C₁₉H₂₇NO₃

Molecular Weight: 317.427

Accurate Mass: 317.199094

Percentage Composition: C 71.89%; H 8.57%; N 4.41%; O 15.12%

Physical Description: Cryst. (MeOH aq.)

Melting Point: Mp 127-128°

Optical Rotation: [α]_D²⁰ -9 (c, 1.0 in MeOH)

Other Data: Pharmacol. active isomer

>>Derivative: Me ester

CAS Registry Number: 105746-47-2

Molecular Formula: C₂₀H₂₉NO₃

Molecular Weight: 331.454

Accurate Mass: 331.214744

Percentage Composition: C 72.47%; H 8.82%; N 4.23%; O 14.48%

Melting Point: Mp 137-138°

Optical Rotation: [α]_D²⁰ +8.8 (c, 1.0 in MeOH)

>>Variant: ($\alpha R, 1'RS, 4'SR$)-form

Synonym(s): D-*cis*-form

CAS Registry Number: 105816-06-6

Molecular Formula: C₁₉H₂₇NO₃

Molecular Weight: 317.427

Accurate Mass: 317.199094

Percentage Composition: C 71.89%; H 8.57%; N 4.41%; O 15.12%

Physical Description: Cryst. (MeOH aq.)

Melting Point: Mp 111-112°

Optical Rotation: [α]_D²⁰ -13.2 (c, 1 in MeOH)

Other Data: Inactive isomer

References:

- Eur. Pat.*, 1986, *Ajinomoto*, 196 222; *CA*, **106**, 85057d, (*synth, pharmacol*)
Shinkai, H. *et al.*, *J. Med. Chem.*, 1989, **32**, 1436-1441, (*synth, isomers pharmacol, Me ester*)
Hirose, H. *et al.*, *Pharmacology*, 1994, **48**, 205-210; 1995, **50**, 175-181; **51**, 245-253, (*pharmacol*)
Akiyoshi, M. *et al.*, *Am. J. Physiol.*, 1995, **268**, E185-E193, (*pharmacol*)
Malaisse, W.J. *et al.*, *Horm. Metab. Res.*, 1995, **27**, 263-266, (*pharmacol*)
Fujita, T. *et al.*, *Biochem. Pharmacol.*, 1996, **52**, 407-411, (*pharmacol*)
Takesda, H. *et al.*, *Bioorg. Med. Chem. Lett.*, 1996, **4**, 1771-1781, (*metab*)
Ono, I. *et al.*, *J. Chromatogr., B: Biomed. Appl.*, 1996, **678**, 384-387; 1997, **692**, 397-404, (*hplc*)
Ikenoue, T. *et al.*, *Br. J. Pharmacol.*, 1997, **120**, 137-145; 1191-1198, (*pharmacol*)
Dunn, C.J. *et al.*, *Drugs*, 2000, **60**, 607-615, (*rev*)