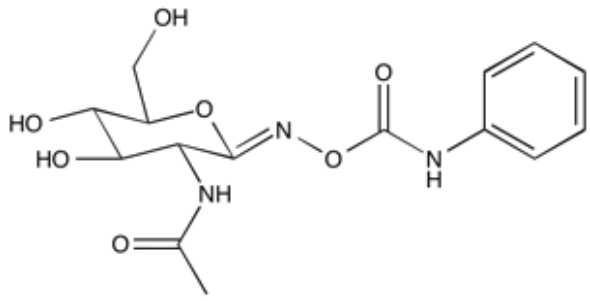
Catalog # 10-2406

PUGNAc

CAS# 132489-69-1

O-(2-Acetamido-2-deoxy-D-glucopyranosylidene)amino-Z-N-phenylcarbamate

Lot # X105458



O-GlcNAcase (*O*-GlcNAc-β-*N*-acetylglucosaminidase) and β-hexosaminidase inhibitor (K_i=46 and 36 nM, respectively). A widely used tool for increasing cellular levels of O-GlcNAc.[2] Protects cardiac function after trauma-hemorrhage which is mediated by increased protein O-GlcNAc levels.[3] Induces insulin resistance in rat skeletal muscle.[4]

1) Macauley *et al*. (2005), *O-GlcNAcase uses substrate-assisted catalysis: kinetic analysis and development of highly selective mechanism-inspired inhibitors*; J. Biol. Chem., **280** 25313
2) Kneass and Marchase (2005), *Protein O-GlcNAc modulates motility-associated signaling intermediates in neutrophils*; J. Biol. Chem., **280** 14579
3) Zou *et al*. (2007), *The protective effects of PUGNAC on cardiac function after trauma-hemorrhage are mediated via increased protein O-GlcNAc levels*; Shock, **27** 402
4) Arias *et al*. (2004), *Prolonged incubation in PUGNAc results in increased protein O-Linked glycosylation and insulin resistance in rat skeletal muscle*; Diabetes, **53** 921

PHYSICAL DATA

Molecular Weight:	353.33
Molecular Formula:	$C_{15}H_{19}N_3O_7$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 35 mg/ml)
Physical Description:	Tan to off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

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