4-Methylumbelliferyl N-acetyl-α-D-glucosaminide

Product Number M 9881
Storage Temperature -0 °C

Product Description

Molecular Formula: C_{18}H_{21}NO_{8}
Molecular Weight: 379.4
CAS Number: 80265-04-9
Melting point: 224.5-225 °C
Specific Rotation: +257° (0.1% in water)

4-Methylumbelliferyl N-acetyl-α-D-glucosaminide is a sensitive fluorogenic substrate for N-acetyl-α-D-glucosaminidase (NAGLU, EC 3.2.1.50). The assay of NAGLU is performed at pH 4.3. The reaction is stopped by the addition of glycine buffer, pH 10.3. Free 4-methylumbelliferone is than determined using an excitation wavelength of 360 nm and fluorescence emission at 480 nm.

Mucopolysaccharidosis type IIIB (MPS IIIB or Sanfilippo syndrome type B) is a lysosomal disease, due to glycosaminoglycan storage caused by mutations on the α-N-acetylgalactosaminidase (NAGLU) gene causing a deficiency of NAGLU activity and defective degradation of heparan sulfate.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in N,N-dimethylformamide (DMF, 10 mg/ml) and pyridine:1 M HCl (1:1, 50 mg/ml) yielding a clear, colorless solution. It has been used at 0.2 mM (76 µg/ml) in 0.2 M acetate buffer, pH 4.3.

References
