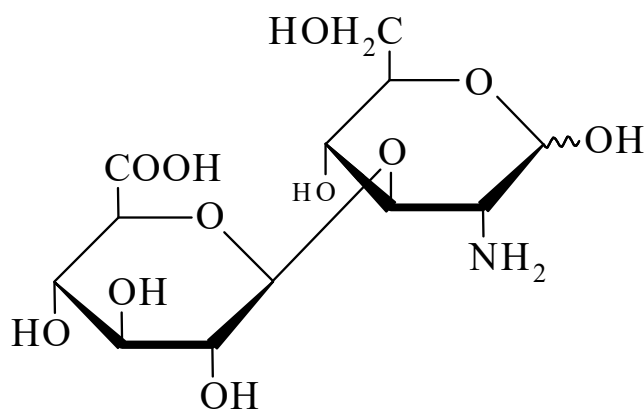




>>Entry Name: Hyalbiuronic acid

Synonym(s): 2-Amino-2-deoxy-3-*O*-β-D-glucopyranuronosyl-D-glucose, 9Cl, 8Cl. Hyalobiuronic acid. β-D-Glucopyranuronosyl-(1→3)-2-amino-2-deoxy-D-glucose



CAS Registry Number: 499-15-0

Molecular Formula: C<sub>12</sub>H<sub>21</sub>NO<sub>11</sub>

Molecular Weight: 355.298

Accurate Mass: 355.111464

Percentage Composition: C 40.57%; H 5.96%; N 3.94%; O 49.53%

Biological Source: Unit disaccharide of Hyaluronic acid [BXK28-Z](#)

Physical Description: Rectangular prisms (monohydrate)

Optical Rotation:  $[\alpha]_D^{20} +34 \rightarrow +30$  (c, 1.08 in 0.1N HCl)

Solubility: Pract. insol. H<sub>2</sub>O, AcOH, MeOH, EtOH, Py

pKa Value: pK<sub>a</sub> 2.67

Other Data: Darkens at 190°

>>Derivative: *N*-Ac

Molecular Formula: C<sub>14</sub>H<sub>23</sub>NO<sub>12</sub>

Molecular Weight: 397.335

Accurate Mass: 397.122029

Percentage Composition: C 42.32%; H 5.83%; N 3.53%; O 48.32%

Optical Rotation:  $[\alpha]_D^{24} -32$  (c, 2.0 in H<sub>2</sub>O)

pKa Value: pK<sub>a</sub> 3.3

>>Variant: α-Pyranose-form

Molecular Formula: C<sub>12</sub>H<sub>21</sub>NO<sub>11</sub>

Molecular Weight: 355.298

Accurate Mass: 355.111464

Percentage Composition: C 40.57%; H 5.96%; N 3.94%; O 49.53%

>>Derivative: Me glycoside, *N*-Ac

Molecular Formula: C<sub>15</sub>H<sub>25</sub>NO<sub>12</sub>

Molecular Weight: 411.362

Accurate Mass: 411.137679

Percentage Composition: C 43.80%; H 6.13%; N 3.40%; O 46.67%

Melting Point: Mp 207-210°

Optical Rotation:  $[\alpha]_D +31$  (c, 0.74 in MeOH)

>>Derivative: Me glycoside, *N*-Ac, Me ester

Molecular Formula: C<sub>16</sub>H<sub>27</sub>NO<sub>12</sub>

Molecular Weight: 425.389

Accurate Mass: 425.153329

Percentage Composition: C 45.18%; H 6.40%; N 3.29%; O 45.13%

Melting Point: Mp 223-225°

Optical Rotation:  $[\alpha]_D^{23} +16$  (c, 1.09 in MeOH)