**Synonym:** 5-Bromo-4-chloro-3-indolyl-β-D-glucuronic Acid, Monocyclohexyl Ammonium Salt

**CAS:** 114162-64-0

**Formula:** C_{20}H_{26}BrClN_{2}O_{7}

**Molecular Wt:** 521.8

**Properties**

- **Form:** Powder
- **Appearance:** White Powder
- **Application:** Molecular Biology
- **Solubility:** DMSO or KOH

**Typical Working Concentration:** 1 mg/mL in staining solution

**Storage Temp:** -20 to 0° C

**Application Notes**

X-Gluc is often used to detect β-glucuronidase (GUS) activity in genetically modified plant tissue. β-glucuronidase is encoded by the gusA (uidA) gene found in *Escherichia coli*. In transformed cells, β-glucuronidase cleaves X-gluc, leaving glucuronic acid and an intermediate indoxyl. The intermediate idoxyl oxidizes and forms an insoluble blue dimer, 5,5’-dibromo-4,4’-dichloro-indigo, indicating GUS activity through blue color.