The crystal structure of the title derivative, methyl 6-(4-bromophenyl)-1-(2,4-dimethoxybenzoyl)-4-hydroxy-2-oxo-1,2-dihydropyridine-3-carboxylate (C_{23}H_{23}BrNO) is determined by X-ray diffraction method and crystallizes in the Orthorhombic space group Pca2_1 with cell parameters a = 16.1028(12) Å, b = 9.7450(7) Å, c = 27.0253(14) Å, V = 4240.9(5) Å^3, Z = 8, D_r = 1.486 mg/m^3, μ = 1.977 mm^{-1}, F_{max} = 1396, λ(MoKα) = 0.71073 Å and the structure was refined to R = 0.0622.

Poly-substituted pyridines represent molecular frameworks that serve as a platform for developing pharmaceutical agents for various applications. They show modulating activity on cardiovascular and neuronal processes and on corticosteroid regulatory circuits and prevent inflammatory and diabetic processes and some show antineoplastic, geroprotective, radioprotective and radiosensitizing effects.

The structure of methyl 6-(4-bromophenyl)-1-(2,4-dimethoxybenzoyl)-4-hydroxy-2-oxo-1,2-dihydropyridine-3-carboxylate contains two independent molecules in the asymmetric unit. The aromatic rings and pyridine ring systems are non coplanar with one another. The Pyridine ring makes dihedral angles of 71.3(4) Å and 85.2(4) Å respectively with the two aromatic ring systems. The structure of the molecules is stabilized by intermolecular C--H...O and intramolecular C--H...O hydrogen bonds.