HPG Protocol and Product Information Sheet

Product Category: Protein Modifiers
Catalog Number(s): m3101-100mg; m3101-1gm; m3101-custom
Product Name: HPG (p-Hydroxyphenylglyoxal)
Alternative Name(s): p-Hydroxyphenylglyoxal monohydrate; 4-hydroxyphenylglyoxal; (P-Hydroxyphenyl)Glyoxal; 2-(4-hydroxyphenyl)-2-oxoacetaldehyde
CAS Number: 24645-80-5
Chemical Formula: C₈H₆O₃
Molecular Weight: 168.15
Storage: Store desiccated at 4°C (ships at ambient temperature)

HPG Modification of Arginine Side Chains

1. Prepare protein or peptide for modification (~ 10 uM) in 100 mM sodium pyrophosphate buffer, pH 9.0.
2. Prepare a 0.1 M solution of p-Hydroxyphenylglyoxal (HPG) in deionized water and adjust pH 9.0 with NaOH.
3. Make a series of dilutions (0.005 - 0.05 M) of the HPG solution from the above step into 100 mM sodium pyrophosphate buffer, pH 9.0.
5. Allow the sample to react at room temperature in the dark 1-3 hours.
6. Desalt samples to remove residual HPG (i.e. gel filtration, dialysis, desalting resin) and elute with deionized water (or appropriate buffer).
7. Quantify the number of modified arginines by measuring the absorbance of the purified protein at 340 nm, pH 9.0, ε = 18,300 M⁻¹ cm⁻¹.

References: