ProteoChem
Crosslinking Protein Biology & Chemistry

# HPG Protocol and Product Information Sheet

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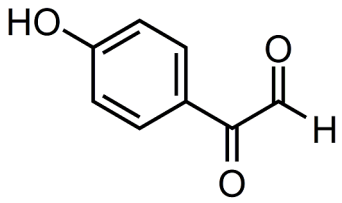
|---|---|
| Product Category: | Protein Modifiers |
| Catalog Number(s): | m3101-100mg; m3101-1gm; m3101-custom |
| Product Name: | HPG (p-Hydroxyphenylglyoxal) |
| Alternative Name(s): | p-Hydroxyphenylglyoxal monohydrate; 4-hydroxyphenylglyoxal; (P-Hydroxyphenyl)Glyoxal; 2-(4-hydroxyphenyl)-2-oxoacetaldehyde |
| CAS Number: | 24645-80-5 |
| Chemical Formula: | $C_8H_6O_3$ |
| 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.
4. Add 10 ul aliquots of the HPG solutions to 90 ul aliquots of your protein solution. Maintain 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, $\varepsilon$ = 18,300 $M^{-1}$ $cm^{-1}$.

## References:

Walker, J.M. (2002) The Protein Protocols Handbook, Second Edition. Humana Press, Totowa, New Jersey.

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