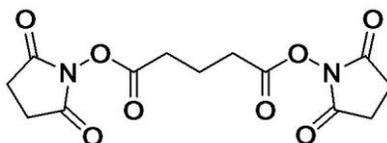


DSG Crosslinker Protocol and Product Information Sheet

Product Category:	Homobifunctional Crosslinkers
Catalog Number(s):	c1104-100mg , c1104-1gm , c1104-custom
Product Name:	DSG Crosslinker
Alternative Name(s):	Disuccinimidyl glutarate; Glutaric acid bis(N-hydroxysuccinimide ester); Di(N-succinimidyl) glutarate
CAS Number:	79642-50-5
Chemical Formula:	C ₁₃ H ₁₄ N ₂ O ₈
Molecular Weight:	326.26
Spacer Arm Length:	7.7 Å
Storage:	Upon receipt store at -20°C (shipped at ambient temperature). Protect from moisture (i.e. humidity); blanket under desiccated, inert gas.



DSG Crosslinking Protocol

1. Allow vial of DSG Crosslinker to fully equilibrate to ambient temperature before opening to prevent condensation inside the vial (DSG is moisture-sensitive).
2. Prepare a 50 mM solution of DSG, by dissolving 10 mg DSG in 540 µL of dry DMSO or dry DMF.
3. Using a 20-fold excess approach (20:1 Crosslinker:Protein), add crosslinker solution to the protein sample in non-amine containing buffer (i.e. 25 mM Sodium Phosphate, pH 7.4), so that the final crosslinker concentration is between 0.5 to 5 mM. Optimal pH range is from 7 to 9.
4. Allow the sample to react at room temperature for 45 minutes to 1 hour. Allow slightly longer if sample must be kept on ice (recommended 2-3 hours). This reaction rate is not highly temperature sensitive.
5. Quench any unreacted DSG with 25 mM to 200 mM Tris, pH 7.4 and allow to react for 10-15 minutes at room temperature.
6. Desalt sample to remove residual crosslinker (i.e. gel filtration or dialysis, etc.)

References:

Wong, S.S. (1993) CRC Chemistry of Protein Conjugation and Crosslinking. CRC Press, Boca Raton, Florida.

Pilch, P.F., Czech, M.P. (1979) J. Biol. Chem. 254, 3375.

Howard, A.D., de La Baume, S., Giannini, T.L., Hiller, J.M., Simon, E.J. (1985) Journal of Biol. Chem. 260, 19, 10833-10839.