

BS2G Crosslinker Protocol and Product Information Sheet

Product Category: Homobifunctional Crosslinkers

Catalog Number(s): c1126-100mg, c1126-1g, c1126-custom

Product Name: BS2G Crosslinker

Alternative Name(s): BS²G; Sulfo-DSG; Bis(Sulfosuccinimidyl) glutarate; Glutaric acid-bis-(3-

sulfo-N-hydroxysuccinimide ester)

CAS Number: n/a

Chemical Formula: $C_{13}H_{12}N_2O_{14}S_2Na_2$

Molecular Weight: 530.35 Spacer Arm Length: 7.7 Å

Storage: Upon receipt store at 4°C (shipped at ambient temperature).

$$NaO_3S$$
 O O O O SO_3Na

General BS2G Crosslinking Protocol

- 1. Immediately before use, prepare a 50 mM solution of BS2G by dissolving 10 mg BS2G crosslinker in 350 μ L of 25 mM Sodium Phosphate, pH 7.4 (do not use amine containing buffers for the conjugation reaction).
- 2. Using a 20-fold excess approach (20:1 Crosslinker:Protein), add crosslinker solution to the protein sample, so that the final crosslinker concentration is between 0.5 to 5 mM.
- 3. Allow the sample to react at room temperature for 45 minutes to 1 hour. Allow slightly longer if reaction must be done on ice (this reaction rate is only slightly slower at low temperatures).
- 4. Quench and unreacted BS2G crosslinking reagent with 25 mM to 60 mM Tris and allow to react for 10-15 minutes at room temperature.
- 5. Desalt sample to remove unreacted crosslinker (i.e. gel filtration, dialysis, etc.)

References:

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

Kotite, N.J., Staros, J.V., Cunningham, L.W. (1984). Biochemistry, 23, 3099-3104.

Dihazi, G.H., Sinz, A. (2003) Rapid Commun. Mass Spectrom. 17, 2005-2014.