

## BS3 Protocol and Product Information Sheet

Product Category:	Homobifunctional Crosslinkers
Catalog Number(s):	<a href="#">c1103-100mg</a> , <a href="#">c1103-1gm</a> , c1103-custom
Product Name:	BS3 Crosslinker
Alternative Name(s):	BS <sup>3</sup> ; Sulfo-DSS; Bis(Sulfosuccinimidyl) suberate; Suberic acid-bis-(3-sulfo-N-hydroxysuccinimide ester)
CAS Number:	82436-77-9
Chemical Formula:	C <sub>16</sub> H <sub>18</sub> N <sub>2</sub> O <sub>14</sub> S <sub>2</sub> Na <sub>2</sub>
Molecular Weight:	572.43
Spacer Arm Length:	11.4 Å
Storage:	Upon receipt store at -20°C or lower under desiccated inert gas (shipped at ambient temperature). Protect from moisture (i.e. humidity); blanket under desiccated, inert gas.



### General BS3 Crosslinking Protocol

1. Allow vial of BS3 Crosslinker to fully equilibrate to ambient temperature before opening to prevent condensation inside the vial (BS3 is moisture-sensitive and will hydrolyze).
2. Immediately before use, prepare a 50mM solution of BS3, by dissolving 10 mg BS3 in 350 µL of 25 mM Sodium Phosphate, pH 7.4 (do not use amine containing buffers for the conjugation reaction). Note: The Sulfo-NHS ester of BS3 is susceptible to hydrolysis. If aliquoted into an aqueous solution and stored in it, then the BS3 will degrade.
3. Using a 20-fold excess approach (20:1 Crosslinker:Protein), add BS3 crosslinker solution to the protein sample so that the final crosslinker concentration is between 0.5 to 5 mM.
4. 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).
5. Quench and unreacted BS3 with 25 mM to 60 mM Tris and allow to react for 10-15 minutes at room temperature.
6. Desalt sample to remove unreacted BS3 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.