

Sulfo-LC-SPDP Crosslinker Protocol and Product Information Sheet

Product Category: Heterobifunctional Crosslinkers

Catalog Number(s): c1118-100mg, c1118-1gm, c1118-custom

Product Name: Sulfo-LC-SPDP Crosslinker

Alternative Name(s): Sulfosuccinimidyl-6-(3'-[2-pyridyldithio]-propionamido) hexanoate

CAS Number: N/A

Chemical Formula: C₁₈H₂₂N₃NaO₈S₃

Molecular Weight: 527.57 Spacer Arm Length: 15.7 Å

Storage: Upon receipt store at -20°C (shipped at ambient temperature). Protect

from moisture (i.e. humidity); blanket under desiccated, inert gas.

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 NaO_3S
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General Sulfo-LC-SPDP Protein Crosslinking Protocol

- 1. Allow vial of Sulfo-LC-SPDP Crosslinker to fully equilibrate to ambient temperature before opening to prevent condensation inside the vial (Sulfo-LC-SPDP is moisture-sensitive).
- 2. Dissolve 6.6 mg of Sulfo-LC-SPDP in 500 µL water to give a 25 mM crosslinker solution.
- 3. Dissolve protein #1 (without active thiol residues) at a concentration of 1-5 mg/mL in 100 mM sodium phosphate buffer, pH 7.2 to pH 8.0, 1 mM EDTA.
- 4. Add 20 µL of 25 mM Sulfo-LC-SPDP crosslinker solution to 1 mL of the above protein solution.
- 5. Allow reaction to proceed for 30-60 minutes at room temperature.
- 6. Remove unreacted Sulfo-LC-SPDP crosslinker from protein containing solution through gelfiltration, such as Desalting Resin g4109-1gm (i.e. Sephadex® G-25).
- 7. Dissolve protein #2 (with active thiol residues) in 100 mM sodium phosphate pH 7.2 to 8.0, 1 mM EDTA buffer.
- 8. Add 0.2 to 1.0 molar equivalents of protein #2 solution to desalted activated protein #1.
- 9. Allow this reaction to proceed for 8 to 16 hours at room temperature.
- 10. To cleave the newly formed conjugate, incubate crosslinked product with 50 mM TCEP-HCl (<u>cr8104-1gm</u>) or DTT (<u>cr8101-5x10mg</u>) for 90-120 minutes at room temperature or 1 hour at 45°C.

References:

Hermanson, G.T. 1996. Bioconjugates Techniques. Academic Press, San Diego, CA USA.