

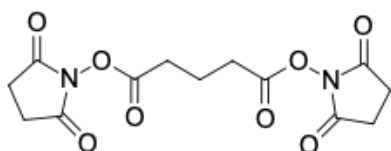
Disuccinimidyl glutarate (DSG)

<http://www.lumiprobe.com/p/disuccinimidyl-glutarate-79642-50-5>

Disuccinimidyl glutarate (DSG) is a homobifunctional crosslinker that contains two N-hydroxysuccinimide (NHS) ester groups at each end of a short 5-atom (7.7 angstrom) spacer.

DSG is a membrane-permeable and non-cleavable crosslinker, allowing for intracellular labeling of peptides and proteins. NHS esters react with amines of lysine residues and N-termini of peptides and proteins, forming a covalent amide bond and releasing the NHS group. DSG is commonly used to pair radiolabelled ligands to cell surface receptors and determine DNA-protein binding interactions in CHIP assays. DSG labeling is often combined with formaldehyde fixation to improve the detection of DNA-protein complexes.

DSG is water-insoluble and must be dissolved in an organic solvent, such as DMSO or DMF, before being added to aqueous solutions.



Structure of Disuccinimidyl glutarate

General properties

- Appearance: off-white powder
- Molecular weight: 326.26
- CAS number: 79642-50-5
- Molecular formula: $C_{13}H_{14}N_2O_8$
- IUPAC name: Bis(2,5-dioxopyrrolidin-1-yl) Pentanedioate
- Solubility: DMF, DMSO
- Quality control: NMR 1H and HPLC-MS (95+%)
- Storage conditions: 12 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
- Legal statement: Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.