# Product Specification Sheet

**Product Name:** Necrosulfonamide (NSA)  
**Catalog Number:** C6327-2 (powder)  
**Package Size:** 2 mg

## Technical information:

- **Chemical Formula:** C₁₉H₁₅N₃O₆S₂  
- **CAS #:** 432531-71-0  
- **Molecular Weight:** 461.47  
- **Purity:** >96%  
- **Formulation:** Light Yellow solid  
- **Solubility:** Soluble in DMSO up to 50 mM  
- **Chemical Name:** (E)-N-[4-[(3-methoxypyrazin-2-yl)sulfamoyl]phenyl]-3-(5-nitrothiophene-2-yl)acrylamide  
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

## Handling:
- For C6327-2 (powder), add 0.433 mL of DMSO to make 10 mM solution.  
- For C6327-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

## Biological Activity:
Necrosulfonamide (NSA) is a very specific and potent necrosis inhibitor with an IC50 less than 0.2 μM. It specifically blocks necrosis downstream of receptor-interacting serine-threonine kinase 3 (RIP3) activation. RIP3 is a key signaling molecule in the programmed necrosis pathway. Treating cells with NSA arrested necrosis at a specific step at which RIP3 formed discrete punctae in cells. Different from Necrostatin-1, NSA does not inhibit the necrosis-induced RIP1 and RIP3 interactions. NSA targets MLKL, a critical substrate of RIP3 during induction of necrosis. It binds the N-terminal of MLKL, covalently modifies Cys86 of human MLKL, and prevents necrosome from interacting with its downstream effectors.

## Reference:

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