**PRODUCT INFORMATION**

**S1RA**

*Item No. 16279*

**CAS Registry No.:** 878141-96-9  
**Formal Name:** 4-[2-[[5-methyl-1-(2-naphthalenyl)-1H-pyrazol-3-yl]oxy]ethyl]-morpholine  
**Synonym:** E-52862  
**MF:** C_{20}H_{23}N_{3}O_{2}  
**FW:** 337.4  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**UV/Vis.:** λ_{max}: 218, 258 nm

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

**Laboratory Procedures**

S1RA is supplied as a crystalline solid. A stock solution may be made by dissolving the S1RA in the solvent of choice. S1RA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of S1RA in these solvents is approximately 1, 15, and 10 mg/ml, respectively.

S1RA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, S1RA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. S1RA has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

The sigma-1 (σ₁) receptor is an intracellular, non-opioid receptor that is abundantly expressed in the central nervous system as well as peripherally. S1RA is a potent, selective antagonist of σ₁ receptors (Kₐ = 17 nM) that weakly binds σ₂ receptors (Kₐ = 9,300 nM).¹ It is active in vivo, dose-dependently inhibiting neuropathic pain in several animal models, including formalin-induced nociception and capsaicin-induced mechanical hypersensitivity.¹ ² S1RA enhances peripheral µ-opioid analgesia without affecting opioid-induced constipation.³

**References**