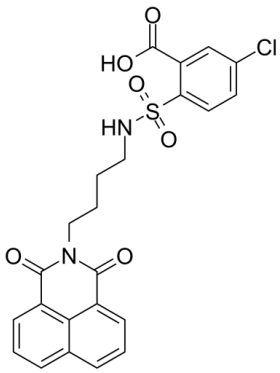
Data Sheet

Product Name:	Radioprotectin-1
Cat. No.:	CS-0084787
CAS No.:	1622006-09-0
Molecular Formula:	C23H19ClN2O6S
Molecular Weight:	486.92
Target:	LPL Receptor
Pathway:	GPCR/G Protein
Solubility:	H2O : < 0.1 mg/mL (insoluble); DMSO : 125 mg/mL (256.72 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Radioprotectin-1 is a potent and specific nonlipid agonist of **lysophosphatidic acid receptor 2 (LPA_2)**, with an **EC_{50}** value of 25 nM for murine LPA_2 subtype[1]. IC50 & Target: EC50: 25 nM (murine LPA_2 subtype)[1] **In Vitro:** Radioprotectin-1 is a potent agonist of LPA_2 with an EC_{50} of 5 pM and functions as a full agonist at the human ortholog of LPA_2[1].

Radioprotectin-1 (0-3 μM; 15 minutes) effectively reduces apoptosis induced by γ-irradiation and the radiomimetic drug Adriamycin in cells that expressed LPA_2 either endogenously or after transfection[1].

In Vivo: Radioprotectin-1 is a high-potency specific agonist of the murine LPA_2 GPCR [1].

Radioprotectin-1 (0.1 mg/kg, 0.3 mg/kg; s.c.; every 12 hours; for 3 days) decreases the mortality of C57BL/6 mice in models of the hematopoietic acute radiation syndromes (HE-ARS) and gastrointestinal acute radiation syndromes (GI-ARS) [1].

Radioprotectin-1 exerts its radioprotective and radiomitigative action through specific activation of the upregulated LPA_2 GPCR in $Lgr5^+$stem cells[1].

References:

[1]. Kuo B, et al. The LPA2 receptor agonist Radioprotectin-1 spares Lgr5-positive intestinal stem cells from radiation injury in murine enteroids. Cell Signal. 2018 Nov;51:23-33.

CAIndexNames:

Benzoic acid, 5-chloro-2-[[[4-(1,3-dioxo-1H-benz[de]isoquinolin-2(3H)-yl)butyl]amino]sulfonyl]-

SMILES:

O=C(O)C1=CC(Cl)=CC=C1S(=O)(NCCCCN(C(C2=CC=CC3=CC=CC4=C23)=O)C4=O)=O

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA