PRODUCT INFORMATION



IT-901

Item No. 22298

CAS Registry No.: Formal Name:	1584121-99-2 5-[(2,4-dimethoxy-1-naphthalenyl)methylene] dibydro-2-thioxo-4 6(1H 5H)-pyrimidinedione	O S N S
MF:	$C_{17}H_{14}N_2O_4S$	
FW:	342.4	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 240, 286, 331, 493 nm	
Supplied as:	A crystalline solid	ŤŤ
Storage:	-20°C	
Stability:	≥4 years	
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.		

Laboratory Procedures

IT-901 is supplied as a crystalline solid. A stock solution may be made by dissolving the IT-901 in the solvent of choice, which should be purged with an inert gas. IT-901 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of IT-901 in these solvents is approximately 33 mg/ml.

IT-901 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IT-901 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. IT-901 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

IT-901 is an inhibitor of the NF-κB subunit c-Rel.¹ It inhibits NF-κB DNA binding in HBL1 cells (IC₅₀ = 0.1 μ M) and reduces TNF- α -induced NF- κ B activity in a reporter assay (IC₅₀ = 4 μ M). IT-901 decreases proliferation of activated B-like (ABC) and germinal center B-like (GCB) human diffuse large B cell lymphoma (DLBCL) cells when used at a concentration of 3 μ M. It increases the expression of heme oxygenase-1 (HO-1; Item No. 22731) in DLBCL cells and increases the production of reactive oxygen species (ROS) in the mitochondria of DLBCL cells but not normal leukocytes. IT-901 increases survival in a mouse model of graft versus host disease (GVHD) when administered at a dose of 24 mg/kg every other day beginning eight days after hematopoietic stem cell transplantation (HSCT). It also reduces tumor growth in mouse xenograft models of B cell lymphoma induced by Epstein-Barr virus (EBV), chronic lymphocytic leukemia (CLL), and Richter syndrome.^{1,2}

References

- 1. Shono, Y., Tuckett, A.Z., Liou, H.-C., et al. Characterization of a c-Rel inhibitor that mediates anticancer properties in hematologic malignancies by blocking NF-κB-controlled oxidative stress responses. Cancer Res. 76(2), 377-389 (2016).
- 2. Vaisitti, T., Gaudino, F., Ouk, S., et al. Targeting metabolism and survival in chronic lymphocytic leukemia and Richter syndrome cells by a novel NF-KB inhibitor. Haematologica 102(11), 1878-1889 (2017).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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