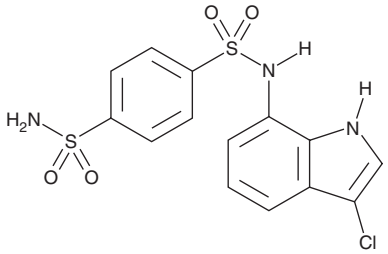
PRODUCT INFORMATION

Indisulam

Item No. 22759

CAS Registry No.:	165668-41-7
Formal Name:	N^1-(3-chloro-1H-indol-7-yl)-1,4-benzenedisulfonamide
Synonym:	E-7070
MF:	$C_{14}H_{12}ClN_3O_4S_2$
FW:	385.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 224, 272, 281 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Indisulam is supplied as a crystalline solid. A stock solution may be made by dissolving the indisulam in the solvent of choice. Indisulam is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of indisulam in these solvents is approximately 30 mg/ml. Indisulam is also slightly soluble in ethanol.

Indisulam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, indisulam should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Indisulam has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Indisulam is a sulfonamide with anticancer activity.[1] *In vitro*, indisulam has antiproliferative effects on a wide range of human tumor lines with HCT116 colorectal being the most sensitive and NCI-H596 non-small cell lung cancer (NSCLC) the most resistant (IC_{50}s = 0.11 and 94 µg/ml, respectively). It increases the number of P388 murine leukemia cells in the G_1 phase of the cell cycle in a dose-dependent manner and exerts time-dependent cytotoxicity against HCT116 cells. *In vivo*, indisulam suppresses tumor growth and decreases tumor volume in murine HCT116, SW620, and HCT15 colorectal and LX-1 and PC9 lung cancer xenograft models. Indisulam induces proteasomal degradation of RNA binding motif protein 39 (RBM39) through association with the CUL4-DCAF15 E3 ubiquitin ligase *in vitro*.[2] It is also an inhibitor of carbonic anhydrase in *H. pylori* (K_i = 310-562 nM).[3]

References

1. Ozawa, Y., Sugi, N.H., Nagasu, T., *et al.* E7070, a novel sulphonamide agent with potent antitumour activity *in vitro* and *in vivo*. *Eur. J. Cancer* **37(17)**, 2275-2282 (2001).
2. Han, T., Goralski, M., Gaskill, N., *et al.* Anticancer sulfonamides target splicing by inducing RBM39 degradation via recruitment to DCAF15. *Science* **356(6336)**, (2017).
3. Nishimori, I., Vullo, D., Minakuchi, T., *et al.* Carbonic anhydrase inhibitors: Cloning and sulfonamide inhibition studies of a carboxyterminal truncated α-carbonic anhydrase from *Helicobacter pylori*. *Bioorg. Med. Chem. Lett.* **16(8)**, 2182-2188 (2006).

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