# **PRODUCT** INFORMATION



MSA-2

Item No. 30140

CAS Registry No.: MF:	129425-81-6 C, H, O-S		
Synonym:	5,6-dimethoxy-γ-oxo-benzo[b]	<sup>0</sup> s o	
	thiophene-2-Butanoic Acid		
FW:	294.3		
Purity:	≥98%	10 <sup>2</sup> V 1	
UV/Vis.:	λ <sub>may</sub> : 213, 238, 324 nm		}—он
Supplied as:	A crystalline solid		O'
Storage:	-20°C		
Stability:	≥4 years		
Information represente	the product execifications. Batch execifi	is analytical results are provided on each s	ortificate of analysi

Laboratory Procedures

MSA-2 is supplied as a crystalline solid. A stock solution may be made by dissolving the MSA-2 in the solvent of choice, which should be purged with an inert gas. MSA-2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MSA-2 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

# Description

MSA-2 is an agonist of stimulator of interferon genes (STING).<sup>1</sup> It binds to wild-type and HAQ variant STING in a <sup>3</sup>H-cGAMP filtration binding assay (EC<sub>50</sub>s = 2.48 and 1.72  $\mu$ M, respectively) and induces secretion of IFN- $\beta$  from THP-1 cells by 129% relative to induction by 2'3'-cGAMP (Item No. 19887) when used at a concentration of 30 µM. MSA-2 reduces tumor growth in an MC-38 syngeneic mouse model of colon carcinoma in a dose-dependent manner and induces tumor regression when administered intratumorally or subcutaneously at doses of 450  $\mu$ g and 50 mg/kg, respectively.<sup>2</sup> It also acts synergistically with an anti-PD-1 antibody in MC-38, CT26, B16/F10, and LL/2 syngeneic mouse models.

# References

- 1. Altman, M.D., Cash, B.D., Chang, W., et al. Benzo[B]thiophene compounds as STING agonists. Merck Sharp & Dohme Corp. US20180093964A1 (2018).
- 2. Pan, B.-S., Perera, S.A., Piesvaux, J.A., et al. An orally available non-nucleotide STING agonist with antitumor activity. Science 369 (6506), eaba6098 (2020).

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.

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