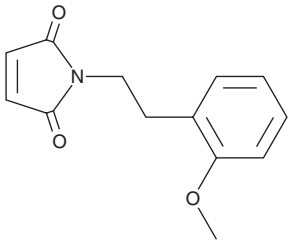
PRODUCT INFORMATION

ALKBH5-IN-5

Item No. 46498

CAS Registry No.:	140481-05-6
Formal Name:	1-[2-(2-methoxyphenyl)ethyl]-1H-pyrrole-2,5-dione
Synonyms:	ALKBH5 Inhibitor 5, Alpha-ketoglutarate-dependent Dioxygenase alkB Homolog 5-IN-5, Alpha-ketoglutarate-dependent Dioxygenase alkB Homolog 5 Inhibitor 5
MF:	$C_{13}H_{13}NO_3$
FW:	231.3
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

ALKBH5-IN-5 is supplied as a solid. A stock solution may be made by dissolving the ALKBH5-IN-5 in the solvent of choice, which should be purged with an inert gas. ALKBH5-IN-5 is sparingly soluble (1-10 mg/ml) in DMSO.

Description

ALKBH5-IN-5 is an inhibitor of the mRNA N^6-methyladenosine (m^6A) demethylase activity of alpha-ketoglutarate-dependent dioxygenase alkB homolog 5 (ALKBH5; IC_{50} = 0.62 µM.[1] It is selective for ALKBH5 over the m^6A demethylase fat mass and obesity-associated protein (FTO) at 50 µM and a panel of 14 proteases at 10 µM. ALKBH5-IN-5 increases m^6A levels in NB4 leukemia cells and reduces the proliferation of MOLM-13, MV4-11, NOMO-1, and NB4 leukemia cells (IC_{50}s = 0.63-2.99 µM). It reduces tumor volume in an NB4 mouse xenograft model and inhibits tumor growth and metastasis in a 143B osteosarcoma mouse xenograft model overexpressing the long non-coding RNA (lncRNA) *ZMIZ1*-AS1, an effect that is enhanced when co-administered with the FGFR inhibitor BGJ398 (Item No. 19157).[1,2]

References

1. Wu, H., Lai, G.Q., Cheng, R., *et al.* Discovery of covalent and cell-active ALKBH5 inhibitors with potent antileukemia effects *in vivo*. *Angew. Chem. Int. Ed. Engl.* **64(18)**, e202424928 (2025).
2. Zhang, Y., Xu, Y., Bao, Y., et al. ALKBH5 demethylation modification of SE-lncRNA ZMIZ1-AS1 promotes FGFR1-mediated proliferation and invasive metastasis in osteosarcoma. *Cell Mol. Life Sci.* **83(1)**, 33 (2025).

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

SAFETY 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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