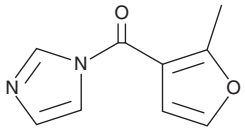
PRODUCT INFORMATION

FAI

Item No. 23429

CAS Registry No.:	1415238-77-5
Formal Name:	1H-imidazol-1-yl(2-methyl-3-furanyl)-methanone
Synonyms:	Furoyl Acylimidazole, 5S rRNA Modificator
MF:	$C_9H_8N_2O_2$
FW:	176.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 268 nm
Supplied as:	A crystalline 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

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

FAI is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FAI should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. FAI has a solubility of approximately 0.12 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

FAI is a selective hydroxyl acylation analyzed by primer extension (SHAPE) electrophile reagent used to map RNA structures *in vivo* by forming stable 2'-hydroxy adducts with RNA, blocking reverse transcriptase elongation.[1,2] Its activity can be quenched by dithiothreitol (DTT) *in vitro* and in living cells.[2] FAI has been used to probe the secondary structure of mouse embryonic stem cell 5S rRNA *in vitro*.[1]

References

1. Spitale, R.C., Crisalli, P., Flynn, R.A., *et al.* RNA SHAPE analysis in living cells. *Nat. Chem. Biol.* **9(1)**, 18-20 (2013).
2. Chan, D., Feng, C., Zhen, Y., *et al.* Comparative analysis reveals furoyl *in vivo* selective hydroxyl acylation analyzed by primer extension reagents form stable ribosyl ester adducts. *Biochemistry* **56(13)**, 1811-1814 (2017).

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