

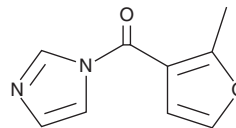
# PRODUCT INFORMATION



## 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 Modifier  
**MF:** C<sub>9</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 176.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 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.<sup>1,2</sup> Its activity can be quenched by dithiothreitol (DTT) *in vitro* and in living cells.<sup>2</sup> FAI has been used to probe the secondary structure of mouse embryonic stem cell 5S rRNA *in vitro*.<sup>1</sup>

### 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).

#### 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.

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