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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

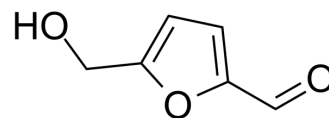
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

5-Hydroxymethylfurfural

| | | |
|--------------------|--|----------------|
| Cat. No.: | HY-Y0051 | |
| CAS No.: | 67-47-0 | |
| Molecular Formula: | C ₆ H ₆ O ₃ | |
| Molecular Weight: | 126.11 | |
| Target: | Fungal | |
| Pathway: | Anti-infection | |
| Storage: | Pure form | -20°C 3 years |
| | In solvent | -80°C 6 months |
| | | -20°C 1 month |



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 50 mg/mL (396.48 mM)
 * "≥" means soluble, but saturation unknown.

| Concentration | Solvent | Mass | | |
|---------------------------|---------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| Preparing Stock Solutions | 1 mM | 7.9296 mL | 39.6479 mL | 79.2959 mL |
| | 5 mM | 1.5859 mL | 7.9296 mL | 15.8592 mL |
| | 10 mM | 0.7930 mL | 3.9648 mL | 7.9296 mL |

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (19.82 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (19.82 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (19.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

5-Hydroxymethylfurfural (2-Hydroxymethyl-5-furfural), derived from *Cornus officinalis*, inhibits yeast growth and fermentation as stressors.

IC₅₀ & Target

Yeast^[1].

In Vitro

It is found that furfural and HMF cause the attenuation of bulk translation activity and the assembly of cytoplasmic mRNP granules in *Saccharomyces cerevisiae*. Notably, a combination of furfural and HMF induce the remarkable repression of

translation initiation and SG formation. Furfural and HMF can induce the formation of cytoplasmic mRNP granules, HMF also causes a gradual reduction in the polysome fraction and a concomitant increase in the 80S monosome fraction^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Research Square Preprint. 2021 Aug.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Iwaki A, et al. Biomass conversion inhibitors furfural and 5-hydroxymethylfurfural induce formation of messenger RNP granules and attenuate translation activity in *Saccharomyces cerevisiae*. *Appl Environ Microbiol*. 2013 Mar;79(5):1661-7.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA