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# Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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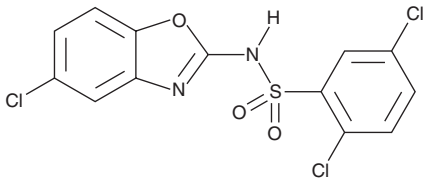
# PRODUCT INFORMATION

## Fructose-1,6-bisphosphatase-1 Inhibitor

*Item No. 18860*

**CAS Registry No.:** 883973-99-7
**Formal Name:** 2,5-dichloro-N-(5-chloro-2-benzoxazolyl)-benzenesulfonamide
**Synonyms:** F1,6BPase-1 Inhibitor, FBP1 Inhibitor, FBPase-1 Inhibitor
**MF:** $C_{13}H_7Cl_3N_2O_3S$
**FW:** 377.6
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 204, 287 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly




### Laboratory Procedures

Fructose-1,6-bisphosphatase-1 (FBPase-1) inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the FBPase-1 inhibitor in the solvent of choice. FBPase-1 inhibitor is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of FBPase-1 inhibitor in these solvents is approximately 14 and 20 mg/ml, respectively.

FBPase-1 inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FBPase-1 inhibitor should first be dissolved in DMF and then diluted with the aqueous buffer of choice. FBPase-1 inhibitor has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

FBPase-1 is an enzyme that catalyzes the conversion of fructose-1,6-bisphosphate to fructose-6-phosphate, which is one of the rate-limiting steps in gluconeogenesis. Excess hepatic FBPase-1 activity contributes to hyperglycemia in patients. Thus, the development of specific FBPase-1 inhibitors is of great clinical interest for the treatment of patients with type 2 diabetes. FBPase-1 inhibitor is a cell-permeable benzoxazolo-sulfonamide compound that blocks human FBPase-1 enzymatic activity with an $IC_{50}$ value of 3.4 µM ($K_i$ = 1.1 µM) by competing at the AMP allosteric binding site.[1,2] It has been shown to block glucose production in rat hepatoma cells that are starved of nutrients with an $IC_{50}$ value of 6.6 µM.[1,2]

### References


1. Lai, C., Gum, R.J., Daly, M., *et al.* Benzoxazole benzenesulfonamides as allosteric inhibitors of fructose-1,6-bisphosphatase. *Bioorg. Med. Chem. Lett.* **16(7)**, 1807-1810 (2006).
2. von Geldern, T.W., Lai, C., Gum, R.J., *et al.* Benzoxazole benzenesulfonamides are novel allosteric inhibitors of fructose-1,6-bisphosphatase with a distinct binding mode. *Bioorg. Med. Chem. Lett.* **16(7)**, 1811-1815 (2006).





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