

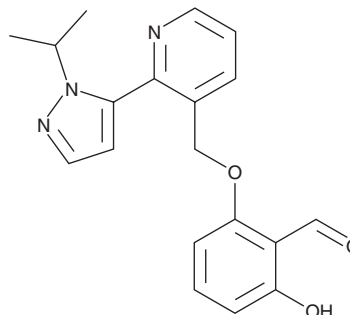
# PRODUCT INFORMATION



## GBT-440

Item No. 23933

**CAS Registry No.:** 1446321-46-5  
**Formal Name:** 2-hydroxy-6-[[2-[1-(1-methylethyl)-1H-pyrazol-5-yl]-3-pyridinyl]methoxy]-benzaldehyde  
**Synonym:** Voxelotor  
**MF:** C<sub>19</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub>  
**FW:** 337.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 272, 276 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

GBT-440 is supplied as a crystalline solid. A stock solution may be made by dissolving the GBT-440 in the solvent of choice, which should be purged with an inert gas. GBT-440 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of GBT-440 in ethanol is approximately 20 mg/ml and approximately 33 mg/ml in DMSO and DMF.

GBT-440 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GBT-440 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GBT-440 has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

GBT-440 is a modulator of sickle hemoglobin (HbS) that binds covalently to the N-terminal valine of the α chain of HbS.<sup>1</sup> *In vitro*, GBT-440 increases HbS affinity for oxygen (EC<sub>50</sub>s = 8.2 and 415 μM for purified HbS and whole blood from sickle cell anemia patients, respectively) and delays oxygen release from and polymerization of HbS in a concentration-dependent manner. GBT-440 (100-150 mg/kg) increases red blood cell half-life and reduces sickling *ex vivo* in whole blood isolated from a murine model of sickle cell anemia. It also reduces *ex vivo* sickling of sickle cell trait red blood cells under conditions of hypoxia, acidosis, and dehydration.<sup>2</sup>

### References

1. Oksenberg, D., Dufu, K., Patel, M.P., *et al.* GBT440 increases haemoglobin oxygen affinity, reduces sickling and prolongs RBC half-life in a murine model of sickle cell disease. *Br. J. Haematol.* **175**(1), 141-153 (2016).
2. Dufu, K., Lehrer-Graiwer, J., Ramos, E., *et al.* GBT440 inhibits sickling of sickle cell trait blood under *in vitro* conditions mimicking strenuous exercise. *Hematol. Rep.* **8**(3), 6637 (2016).

#### 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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