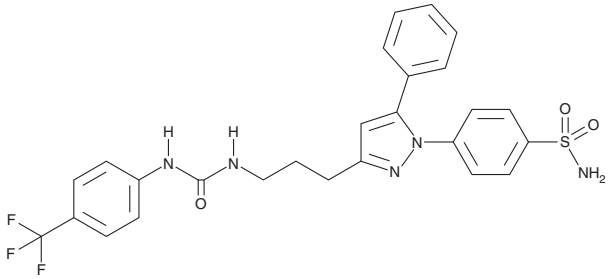
PRODUCT INFORMATION

PTUPB

Item No. 10897

CAS Registry No.:	1287761-01-6
Formal Name:	4-[5-phenyl-3-[3-[[[[4-(trifluoromethyl) phenyl]amino]carbonyl]amino]propyl]-1H-pyrazol-1-yl]-benzenesulfonamide
MF:	$C_{26}H_{24}F_3N_5O_3S$
FW:	543.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 253 nm
Supplied as:	A 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

PTUPB is supplied as a solid. A stock solution may be made by dissolving the PTUPB in the solvent of choice, which should be purged with an inert gas. PTUPB is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PTUPB in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

PTUPB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PTUPB should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PTUPB has a solubility of approximately 0.30 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PTUPB is a dual inhibitor of soluble epoxide hydrolase (sEH) and COX-2 (IC_{50}s = 0.009 and 1.26 µM, respectively).[1] It is selective for sEH and COX-2 over COX-1 (IC_{50} = >100 µM). PTUPB (10 mg/kg) increases latency to paw withdrawal in the von Frey mechanical assay in a rat model of LPS-induced inflammatory pain. It inhibits VEGF-induced angiogenesis in a Matrigel™ plug assay in mice, as well as reduces the number of metastases in a murine Lewis lung carcinoma model, when administered at a dose of 30 mg/kg per day.[2] PTUPB reduces body and hepatic weights, as well as hepatic triglyceride and cholesterol levels and collagen deposition in a mouse model of high-fat diet-induced non-alcoholic fatty liver disease (NAFLD).[3]

References

1. Hwang, S.H., Wagner, K.M., Morisseau, C., *et al.* Synthesis and structure-activity relationship studies of urea-containing pyrazoles as dual inhibitors of cyclooxygenase-2 and soluble epoxide hydrolase. *J. Med. Chem.* **54(8)**, 3037-3050 (2011).
2. Zhang, G., Panigrahy, D., Hwang, S.H., *et al.* Dual inhibition of cyclooxygenase-2 and soluble epoxide hydrolase synergistically suppresses primary tumor growth and metastasis. *Proc. Natl. Acad. Sci. USA* **111(30)**, 11127-11132 (2014).
3. Sun, C.-C., Zhang, C.-Y., Duan, J.-X., *et al.* PTUPB ameliorates high-fat diet-induced non-alcoholic fatty liver disease via inhibiting NLRP3 inflammasome activation in mice. *Biochem. Biophys. Res. Commun.* **523(4)**, 1020-1029 (2020).

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