

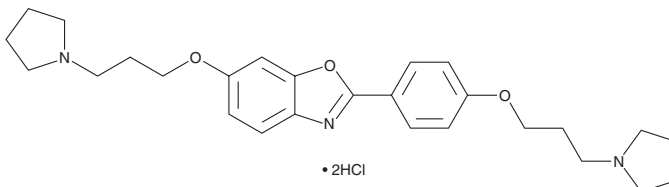
PRODUCT INFORMATION



E6446 (hydrochloride)

Item No. 37296

CAS Registry No.: 1345675-25-3
Formal Name: 6-[3-(1-pyrrolidinyl)propoxy]-2-[4-[3-(1-pyrrolidinyl)propoxy]phenyl]-benzoxazole, dihydrochloride
MF: C₂₇H₃₅N₃O₃ • 2HCl
FW: 522.5
Purity: ≥95%
UV/Vis.: λ_{max}: 258, 276, 317 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

E6446 (hydrochloride) is supplied as a solid. Aqueous solutions of E6446 (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. E6446 (hydrochloride) is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

E6446 is an antagonist of toll-like receptor 7 (TLR7) and TLR9 (IC₅₀s = 1.78 and 0.01 μM, respectively).¹ It is selective for TLR7 and TLR9 over TLR4 (IC₅₀ = 10.58 μM). E6446 inhibits IL-6 production induced by the TLR9 agonist CpG ODN2216 or TLR7 agonist RNA40 in isolated mouse bone marrow-derived dendritic cells (BMDCs) in a concentration-dependent manner. It prevents increases in left ventricle chamber size and cardiac fibrosis in a mouse model of heart failure induced by transverse aortic constriction when administered at a dose of 1.5 mg/animal.² E6446 (10 mg/kg) increases survival and reduces increases in right ventricular systolic pressure and hypertrophy in a rat model of pulmonary hypertension induced by the alkaloid monocrotaline (Item No. 16666).³ It has also been used to enhance the transfection efficiency of cell-penetrating peptides for the delivery of mRNA *in vitro*.⁴

References

1. Lamphier, M., Zheng, W., Latz, E., *et al.* Novel small molecule inhibitors of TLR7 and TLR9: Mechanism of action and efficacy *in vivo*. *Mol. Pharmacol.* **85**(3), 429-440 (2014).
2. Ueda, H., Yamaguchi, O., Taneike, M., *et al.* Administration of a TLR9 inhibitor attenuates the development and progression of heart failure in mice. *JACC Basic Transl. Sci.* **4**(3), 348-363 (2019).
3. Ishikawa, T., Abe, K., Ishikawa-Takana, M., *et al.* Chronic inhibition of toll-like receptor 9 ameliorates pulmonary hypertension in rats. *J. Am. Heart Assoc.* **10**(7), e019247 (2021).
4. Bell, G.D., Yang, Y., Leung, E., *et al.* mRNA transfection by a Xentry-protamine cell-penetrating peptide is enhanced by TLR antagonist E6446. *PLoS One* **13**(7), e0201464 (2018).

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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