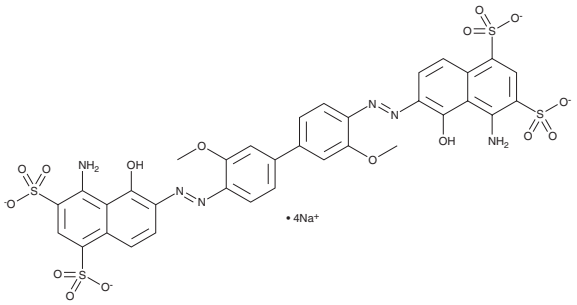
PRODUCT INFORMATION

Chicago Sky Blue 6B

Item No. 31542

CAS Registry No.: 2610-05-1
Formal Name: 6,6′-[(3,3′-dimethoxy[1,1′-biphenyl]-4,4′-diyl)*bis*(2,1-diazenediyl)]*bis*[4-amino-5-hydroxy-1,3-naphthalenedisulfonic acid, tetrasodium salt
Synonyms: Chicago Skye Blue 6B, C.I. 24410, CSB6B, NCI 9617, Pontamine Sky Blue
MF: $C_{34}H_{24}N_6O_{16}S_4 \bullet 4Na$
FW: 992.8
Purity: ≥90%
UV/Vis.: λ_{max}: 319, 608 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

Chicago sky blue 6B (CSB6B) is supplied as a crystalline solid. Aqueous solutions of CSB6B can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CSB6B in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CSB6B is a dye and derivative of glutamate with diverse biological activities.[1-5] It is a competitive inhibitor of vesicular glutamate transporters (vGLUTs), inhibiting glutamate uptake by rat brain synaptic vesicles (K_i = 0.19 µM) but not by synaptosomes when used at a concentration of 0.1 mM.[1] CSB6B is also an inhibitor of calcium/calmodulin-dependent protein kinase phosphatase (CaMKP) and its nuclear isoform CaMKP-N (IC_{50}s = 4.1 and 1 µM, respectively).[2] It is selective for CaMKP and CaMKP-N over protein phosphatase 2C (PP2C) and calcineurin, which it inhibits by less than 10 and 20%, respectively, at 10 µM. CSB6B inhibits sodium/taurocholate cotransporting polypeptide (NTCP; IC_{50} = 7.1 µM) and reduces hepatitis B virus (HBV) and hepatitis delta virus (HDV) infection in HepaRG cells when used at a concentration of 17 µM.[3] Intracerebroventricular administration of CSB6B (0.5 µg) inhibits inflammatory pain in mice, reducing writhing induced by acetic acid and nociceptive behavior during the second phase of the formalin test without affecting locomotor activity.[4] It also reduces thermal hyperalgesia in the complete Freund's adjuvant test but not thermal pain in the hot plate test. CSB6B has also been used as a counterstain to reduce background autofluorescence in immunohistochemical preparations.[5]

References

1. Roseth, S., Fykse, E.M., and Fonnum, F. *J. Neurochem.* **65(1)**, 96-103 (1995).
2. Sueyoshi, N., Takao, T., Nimura, T., *et al. Biochem. Biophys. Res. Commun.* **363(3)**, 715-721 (2007).
3. Donkers, J.M., Zehnder, B., van Westen, G.J.P., *et al. Sci. Rep.* **7(1)**, 15307 (2017).
4. Yu, G., Yi, S., Wang, M., *et al. Behav. Pharmacol.* **24(8)**, 653-658 (2013).
5. Cowen, T., Haven, A.J., and Burnstock, G. *Histochemistry* **82(3)**, 205-208 (1985).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM