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PRODUCT INFORMATION



BAY 60-2770

Item No. 20077

CAS Registry No.: 1027642-43-8

Formal Name: 4-[[[(4-carboxybutyl)[2-[5-fluoro-2-[[4'-(trifluoromethyl)[1,1'-biphenyl]-4-yl]methoxy]phenyl]ethyl]amino]methyl]-benzoic acid

MF: $C_{35}H_{33}F_4NO_5$

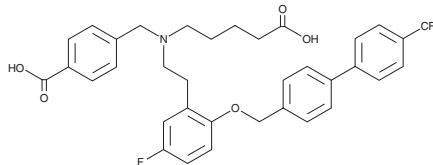
FW: 623.6

Purity: $\geq 95\%$

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

BAY 60-2770 is supplied as a solid. A stock solution may be made by dissolving the BAY 60-2770 in the solvent of choice, which should be purged with an inert gas. BAY 60-2770 is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

BAY 60-2770 is an activator of soluble guanylate cyclase (sGC; $EC_{50}s = 592$ and 573 nM for the $\alpha 1\beta 1$ and $\alpha 2\beta 1$ isoforms, respectively).¹ It increases cGMP levels in, and inhibits the aggregation of, collagen- or thrombin-activated washed isolated human platelets, effects that can be potentiated by ODQ (Item No. 81410).² BAY 60-2770 (10 μM) inhibits doxorubicin-induced decreases in the viability of, and increases in reactive oxygen species (ROS) levels in, H9c2 cardiomyocytes in an *in vitro* model of cardiotoxicity.³ It decreases pulmonary and systemic arterial pressure in a rat model of pulmonary hypertension induced by monocrotaline (Item No. 16666).⁴ BAY 60-2770 (1 mg/kg) reduces eosinophil infiltration into bronchoalveolar lavage fluid (BALF) and lung tissue in an ovalbumin-sensitized mouse model of allergic airway inflammation.⁵ It reverses obesity-induced increases in the frequency of voiding and non-voiding bladder contractions in mice fed a high-fat diet when administered at a dose of 1 mg/kg.⁶

References

1. Sömmmer, A., Sandner, P., and Behrends, S. BAY 60-2770 activates two isoforms of nitric oxide sensitive guanylyl cyclase: Evidence for stable insertion of activator drugs. *Biochem. Pharmacol.* **147**, 10-20 (2018).
2. Mendes-Silverio, C.B., Leiria, L.O., Morganti, R.P., *et al.* Activation of haem-oxidized soluble guanylyl cyclase with BAY 60-2770 in human platelets lead to overstimulation of the cyclic GMP signaling pathway. *PLoS One* **7**(11), e47223 (2012).
3. Zhao, X.X., Cho, H., Lee, S., *et al.* BAY60-2770 attenuates doxorubicin-induced cardiotoxicity by decreased oxidative stress and enhanced autophagy. *Chem. Biol. Interact.* **328**, 109190 (2020).
4. Pankey, E.A., Bhartiya, M., Badejo, A.M., Jr., *et al.* Pulmonary and systemic vasodilator responses to the soluble guanylyl cyclase activator, BAY 60-2770, are not dependent on endogenous nitric oxide or reduced heme. *Am. J. Physiol. Heart Circ. Physiol.* **300**(3), H792-H802 (2011).
5. Baldissera, L., Jr., Squebola-Cola, D.M., Calixto, M.C., *et al.* The soluble guanylyl cyclase activator BAY 60-2770 inhibits murine allergic airways inflammation and human eosinophil chemotaxis. *Pulm. Pharmacol. Ther.* **41**, 86-95 (2016).
6. Leiria, L.O., Silva, F.H., Davel, A.P., *et al.* The soluble guanylyl cyclase activator BAY 60-2770 ameliorates overactive bladder in obese mice. *J. Urol.* **191**(2), 539-547 (2014).

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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