

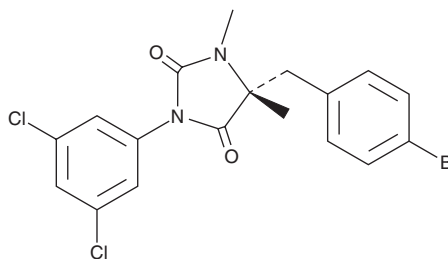
PRODUCT INFORMATION



BIRT 377

Item No. 43171

CAS Registry No.: 213211-10-0
Formal Name: (5R)-5-[(4-bromophenyl)methyl]-3-(3,5-dichlorophenyl)-1,5-dimethyl-2,4-imidazolidinedione
MF: C₁₈H₁₅BrCl₂N₂O₂
FW: 442.1
Purity: ≥98%
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

BIRT 377 is supplied as a solid. A stock solution may be made by dissolving the BIRT 377 in the solvent of choice, which should be purged with an inert gas. BIRT 377 is soluble (≥10 mg/ml) in DMSO. BIRT 377 is slightly soluble (0.1-1 mg/ml) in ethanol.

Description

BIRT 377 is a negative allosteric modulator (NAM) of lymphocyte function-associated antigen-1 (LFA-1).¹ It binds to LFA-1 at a site distal to residues involved in intercellular adhesion molecule interactions and induces a conformational change to its inactive state.² BIRT 377 selectively inhibits the interaction of LFA-1 to intercellular adhesion molecule-1 (ICAM-1) over the interaction between ITGAM/CD11b, also known as Mac-1, and ICAM-1 in cell-free assays at 225 μM.¹ It inhibits LFA-1-mediated binding of SKW-3 cells to ICAM-1 (IC₅₀ = 2.6 μM) and reduces plasma IL-2 levels increased by staphylococcal enterotoxin B (SEB) in mice when administered at doses of 25 and 50 mg/kg. Intrathecal administration of BIRT 377 (500 ng/animal) reduces allodynia in prenatal alcohol exposed (PAE) rats in a model of sciatic neuropathy induced by a minor chronic constriction injury.³

References

1. Kelly, T.A., Jeanfavre, D.D., McNeil, D.W., *et al.* Cutting edge: A small molecule antagonist of LFA-1-mediated cell adhesion. *J. Immunol.* **163**(10), 5173-5177 (1999).
2. Last-Barney, K., Davidson, W., Cardozo, M., *et al.* Binding site elucidation of hydantoin-based antagonists of LFA-1 using multidisciplinary technologies: Evidence for the allosteric inhibition of a protein--protein interaction. *J. Am. Chem. Soc.* **123**(24), 5643-5650 (2001).
3. Sanchez, J.J., Sanchez, J.E., Noor, S., *et al.* Targeting the β2-integrin LFA-1, reduces adverse neuroimmune actions in neuropathic susceptibility caused by prenatal alcohol exposure. *Acta Neuropathol. Commun.* **7**(1), 54 (2019).

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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