www.bioss.com.cn
sales@bioss.com.cn
techsupport@bioss.com.cn
400-901-9800

(R)-2-HG

产品编号: D50777
CAS: 103404-90-6
分子式: C5H6Na2O5
纯度: ≥98%
InChi: InChI=1S/C5H8O5.2Na/c6-3(5(9)10)1-2-4(7)8;;/h3,6H,1-2H2,(H,7,8)(H,9,10);;/q;2*+1/p-2/t3-;;/m1../s1
InChi Key: DZHFTEDSQFPDPP-HWYNEVGZSA-L
Smiles: [Na+].[Na+].[O-]C(=O)CC[C@@H](O)C([O-])=O
外观: 固体粉末
作用通路: ATP Synthase
溶解性: Water up to 100 mM
保存条件: Store in dry, dark place for one year.
产品介绍: Mutations in IDH1 and IDH2, the genes coding for isocitrate dehydrogenases 1 and 2, are common in several human cancers, such as leukemia and glioma, and result in overproduction of the (R)-enantiomer of 2- hydroxyglutarate [(R)-2-HG]. Elucidation of the role of IDH mutations and (R)-2-HG in leukemogenesis has been hampered by a lack of appropriate cell-based models. It has been recently reported that a canonical IDH1 mutant, IDH1 R132H, promoted cytokine independence and blocks differentiation in hematopoietic cells. These effects can be recapitulated by (R)-2-HG, but not (S)-2-HG, despite the fact that (S)-2-HG more potently inhibits enzymes previously linked to the pathogenesis of IDH mutant tumors, such as the 5'- methylcytosine hydroxylase TET2. This paradox is perhaps due to the ability of (S)-2-HG, but not (R)-2-HG, to inhibit the EglN prolyl hydroxylases. 2-HG has also been shown to inhibit the activity of multiple other a- KG-dependent dioxygenases, including the JmjC domain-containing histone demethylases (KDMs).