DYRK

Dual specificity tyrosine phosphorylation regulated kinase; Dual specificity tyrosine regulated kinase

Mammalian DYRKs are a subfamily of mitogen-activated protein kinase-related protein kinases and are originally discovered on the basis of homology to the Saccharomyces cerevisiae Yak1 and Drosophila mini-brain kinases. DYRKs possess Ser/Thr phosphorylation activity as well as autophosphorylation activity on Tyr residue(s).

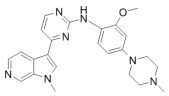
Two isoforms of DYRK, DYRK1A and DYRK1B, co-immunoprecipitate with HAN11 when coexpressed in COS cells indicating that the proteins interact in mammalian cells. Co-expression of DYRK1A, DYRK1B, or DYRK2 with a series of glycogen synthase mutants with Ser/Ala substitutions at the phosphorylation sites in COS cells revealed that protein kinases cause phosphorylation of site 3a in glycogen synthase. Control of glycogen synthase by DYRK represents a novel mechanism, and a potentially novel pathway, for the regulation of glycogen synthesis.

DYRK Inhibitors

AZ191

Cat. No.: HY-12277

AZ191 is a potent inhibitor that selectively inhibits **DYRK1B** with IC_{50} of 17 nM.



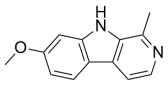
Purity: 99.63%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Harmine

(Telepathine)

Cat. No.: HY-N0737A

Harmine is a natural dual-specificity tyrosine phosphorylation-regulated kinase ((**DYRK**)) inhibitor with anticancer and anti-inflammatory activities.

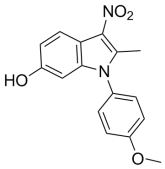


Purity: 99.78%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 500 mg

ID-8

Cat. No.: HY-15838

ID-8 is a DYRK inhibitor, and sustains embryonic stem cell self-renewal in long-term culture.



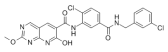
Purity: 99.71%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Mirk-IN-1

(Dyrk1B/A-IN-1)

Cat. No.: HY-12838

Mirk-IN-1 is a potent inhibitor of Dyrk1B(Mirk kianse) and Dyrk1A with IC50 of 68±48 nM and 22±8 nM respectively. IC50 value: 68±48/22±8 nM (Dyrk1B/Dyrk1A) Target: Dyrk inhibitor Mirk-IN-1 had an EC50 of 1.9 ±0.2 mmol/L on SW620 cells.

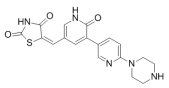


Purity: 99.53%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

Protein kinase inhibitors 1

Cat. No.: HY-U00439

Protein kinase inhibitors 1 is a novel inhibitor of **HIPK2** with an IC_{50} of 74 nM and K_d of 9.5 nM.

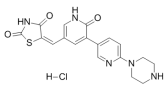


Purity: >99.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Protein kinase inhibitors 1 hydrochloride

Cat. No.: HY-U00439A

Protein kinase inhibitors 1 hydrochloride is a potent **HIPK2** inhibitor, with IC_{50}s of 136 and 74 nM for HIPK1 and HIPK2, and a K_d of 9.5 nM for HIPK2.



Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg