

ADP-TAMRA conjugate [5-TAMRA-eda-ADP]

Catalog number: 13606

Unit size: 100 nmol

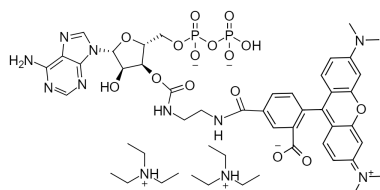
Product Details

Storage Conditions	Freeze (<math>< -15\text{ }^{\circ}\text{C}</math>), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Red solid
Molecular Weight	1309.30
Soluble In	DMSO

Chemical Structure


Spectral Properties

Excitation Wavelength	552 nm
Emission Wavelength	578 nm

Applications

Fluorescently labeled ADP molecules are used to screening ADP-binding enzymes and other protein targets for drug discovery. This ADP-TAMRA has been tested for binding kynurenine monoxygenase (KMO) with a $K(d)$ value of $0.60 \pm 0.05 \text{ }\mu\text{M}$ and to the NMOs from *Aspergillus fumigatus* and *Mycobacterium smegmatis* with $K(d)$ values of 2.1 ± 0.2 and $4.0 \pm 0.2 \text{ }\mu\text{M}$, respectively (Anal Biochem. 2012, 425, 80-7). The assay was tested in competitive binding experiments with substrates and products of KMO and an NMO. NMOs are essential for pathogenesis in fungi and bacteria. NMOs catalyze the hydroxylation of sine and ornithine in the biosynthesis of hydroxamate-containing siderophores. Inhibition of KMO, which catalyzes the conversion of kynurenine to 3-hydroxykynurenine, alleviates neurodegenerative disorders such as Huntington's and Alzheimer's diseases and brain infections caused by the parasite *Trypanosoma brucei*.