# DIBA-Cy5

**Cat. No.:** HY-151801

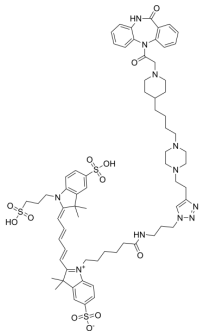
**Molecular Formula:** $C_{69}H_{89}N_{11}O_{12}S_3$

**Molecular Weight:** 1360.71

**Target:** mAChR

**Pathway:** GPCR/G Protein; Neuronal Signaling

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

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| **Description** | DIBA-Cy5 is a fluorescent DIBA antagonist made up be DIBA-alkyne binding Cyanine5 fluorophores (Cy5) and polyethylene glycol (PEG) biomolecules. DIBA-Cy5 can serve as a fluorescent ligand, suitable for probe attachment through click chemistry. DIBA-Cy5 exerts a high binding affinity to type-2 mAChR (M2R) with the $K_d$ value of 1.80 nM, can directly stain M2R receptors in the sinoatrial node of a mouse heart[1]. | |
| **$IC_{50}$ & Target** | mAChR2<br>1.80 nM (Kd) | mAChR1<br>104.5 nM (Kd) |
| **In Vitro** | DIBA-Cy5 (0.01 nM-1 mM; 5 h) shows selective binding property for type-2 mAChR ($M_2R$) over $M_1R$, with $K_d$ of 1.08 nM and 104.5 nM, respectively[1].<br>DIBA-Cy5 (10 nM; 3 h) exerts the competitive binding mode with orthosteric antagonist Atropine (HY-B1205)/allosteric modulator LY2119620 (HY-15885), indicating a dualsteric binding mode of the DIBA-type antagonist to M2R[1].<br>DIBA-Cy5 (50 nM; 16 h) results direct staining to M2R receptors in the sinoatrial node of a mouse heart. DIBA-Cy5 can be used binding assays that screen compounds for M2R as the receptor target[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. | |

## REFERENCES

[1]. Yang H, et al. Click Chemistry-Enabled Conjugation Strategy for Producing Dibenzodiazepinone-Type Fluorescent Probes To Target M2 Acetylcholine Receptors. Bioconjug Chem. 2022 Nov 3.



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