Product Specifications

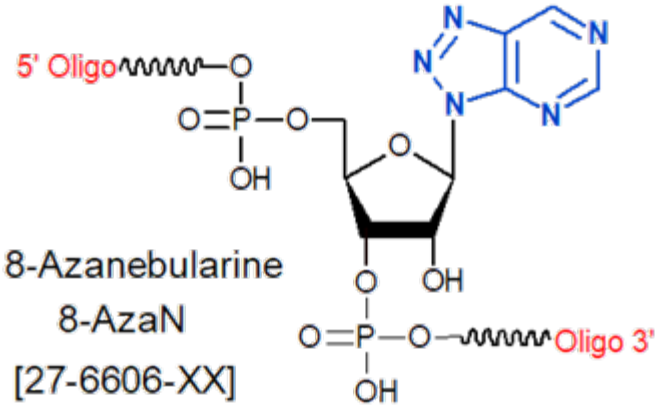
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2′-5′ linked Oligos

Oligo Modifications

For research use only. Not for use in diagnostic procedures for clinical purposes.

8-Azanebularine ribo

Category	Others
Modification Code	8-AzaN
Reference Catalog Number	27-6606
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	315.17



8-azaN-modified RNA duplexes that selectively bind and inhibit ADAR1 but not the closely related ADAR2 enzyme. 8-azaN-modified RNA oligo duplexes that selectively bind and inhibit ADAR1 but not the closely related ADAR2 enzyme

Adenosine deaminases acting on RNA (ADARs) are RNA editing enzymes that catalyze the hydrolytic deamination of adenosine (A) to inosine (I) in dsRNA. In humans, two catalytically active ADARs, ADAR1 and ADAR2, perform this A-to-I editing event. The growing field of nucleotide base editing has highlighted ADARs as promising therapeutic agents while multiple studies have also identified ADAR1's role in cancer progression. However, the potential for site-directed RNA editing as well as the rational design of inhibitors is being hindered by the lack of detailed molecular understanding of RNA recognition by ADAR1. The investigators designed short RNA duplexes containing the nucleoside analog, 8-azanebularine (8-azaN), to gain insight into molecular recognition by the human ADAR1 catalytic domain.

References

1. Selective Inhibition of ADAR1 Using 8-Azanebularine-Modified RNA Duplexes. Herra G. Mendoza; Victorio Jauregui Matos; SeHee Park; Kevin M. Pham and Peter A. Beal Biochemistry 2023, 62, 8, 1376-1387 .
2. Chemical Modifications in RNA: Elucidating the Chemistry of dsRNA-Specific Adenosine Deaminases (ADARs) Herra G. Mendoza and Peter A. Beal. Acc. Chem. Res. 2023, 56, 18, 2489-2499