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2'-5'-Oligoadenylate

National Cancer Institute

Source

National Cancer Institute. 2'-5'-Oligoadenylate. NCI Thesaurus. Code C126910.

An oligonucleotide synthesized from adenosine triphosphate (ATP) by enzymes in the 2'-5'-oligoadenylate synthase family. The production of 2'-5'-oligoadenylate is stimulated by the presence of double stranded RNA (dsRNA) and binds to inactive monomeric forms of ribonuclease L (RNase L), thereby promoting RNase L dimerization and activation. Active RNase L degrades both cellular and viral RNAs, which inhibits protein translation and leads to the abrogation of viral replication. 2'-5'-oligoadenylates play a key role in the innate immunity against viruses.