

# Adenosine

**Other names:**

.beta.-adenosine  
6-Amino-9«beta»-D-ribofuranosyl-9H-purine  
6-Amino-9Â«betaÂ»-D-ribofuranosyl-9H-purine  
6-amino-9.beta.-D-ribofuranosyl-9H-purine  
9-.beta.-D-ribofuranosidoadenine  
9-«beta»-D-Ribofuranosidoadenine  
9-«beta»-D-Ribofuranosyl-9H-purin-6-amine  
9-«beta»-d-Ribofuranosyladenine  
9-Â«betaÂ»-D-Ribofuranosidoadenine  
9-Â«betaÂ»-D-Ribofuranosyl-9H-purin-6-amine  
9-Â«betaÂ»-d-Ribofuranosyladenine  
9H-Purin-6-amine, 9-«beta»-d-ribofuranosyl-  
9H-Purin-6-amine, 9-Â«betaÂ»-d-ribofuranosyl-  
Adenine nucleoside  
Adenine riboside  
Adenocard  
Adenocor  
Adenoscan  
Adenosin  
Boniton  
Myocol  
NSC 7652  
Nucleocardyl  
Sandesin  
USAF CB-10  
adenenine riboside  
«beta»-Adenosine  
«beta»-D-Ribofuranose, 1-(6-amino-9H-purin-9-yl)-1-deoxy-  
«beta»-d-Adenosine  
«beta»-d-Ribofuranoside, adenine-9  
Â«betaÂ»-Adenosine  
Â«betaÂ»-D-Ribofuranose, 1-(6-amino-9H-purin-9-yl)-1-deoxy-  
Â«betaÂ»-d-Adenosine  
Â«betaÂ»-d-Ribofuranoside, adenine-9

**Inchi:**

InChI=1S/C10H13N5O4/c11-8-5-9(13-2-12-8)15(3-14-5)10-7(18)6(17)4(1-16)19-10/h2-4,

**InchiKey:**

OIRDTQYFTABQOQ-UHFFFAOYSA-N

**Formula:**

C10H13N5O4

**SMILES:**

Nc1ncnc2c1ncn2C1OC(CO)C(O)C1O

**Mol. weight [g/mol]:**

267.24

**CAS:**

58-61-7

# Physical Properties

Property code	Value	Unit	Source
affp	989.30	kJ/mol	NIST Webbook
basg	956.80	kJ/mol	NIST Webbook
log10ws	-1.70		Aqueous Solubility Prediction Method
logp	-1.980		Crippen Method
mcvol	175.360	ml/mol	McGowan Method
tf	507.90	K	Aqueous Solubility Prediction Method

## Sources

Partial Molar Isentropic and Isothermal Compressions of the Nucleosides Adenosine, Cytidine, and Uracil in Aqueous Solution at 298.15 K: McGowan Method: <https://www.doi.org/10.1021/je101264r>  
<http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx>  
<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C58617&Units=SI>

Crippen Method: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

The partial molar volumes at T = (288.15 to 313.15) K, and the partial molar expansivities and compressibilities of the nucleosides adenosine, cytosine, and uracil in aqueous solution, 1-20 wt% and 0 to 20 wt% NaCl: <https://www.doi.org/10.1016/j.jct.2008.01.020>

Partial molar properties and expansions of nucleosides adenosine, cytosine, and uracil in aqueous solution, 1-20 wt% and 0 to 20 wt% NaCl: <https://www.doi.org/10.1016/j.jct.2012.12.028>

Partial molar properties and expansions of nucleosides adenosine, cytosine, and uracil in aqueous solution, 1-20 wt% and 0 to 20 wt% NaCl: <https://www.doi.org/10.1016/j.jct.2017.07.023>

Solvation of adenosine in aqueous solutions of N,N-dimethylformamide, N-methyl-2-pyrrolidone, dimethyl sulfoxide and propylene glycol

## Legend

**affp:** Proton affinity  
**basg:** Gas basicity  
**log10ws:** Log10 of Water solubility in mol/l  
**logp:** Octanol/Water partition coefficient  
**mcvol:** McGowan's characteristic volume  
**tf:** Normal melting (fusion) point

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