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DATASHEET

4-Aminopyridine (4-AP)

Product overview

Name	4-Aminopyridine (4-AP)
Cat No	HB1073
Alternative names	4-AP, 4AP
Biological action	Blocker
Purity	>99%
Description	Non-selective voltage gated K^+ channel blocker

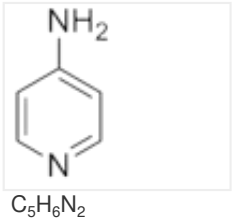
Biological Data

Biological description	4-Aminopyridine (4-AP) is a non-selective voltage gated K^+ channel blocker which blocks $K_v1.1$ and $K_v1.2$ channels (IC_{50} values are 170 and 230 µM respectively). 4-aminopyridine facilitates synaptic and neuromuscular transmission. 4-AP shows proconvulsive actions.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in water (100mM) and in DMSO (100 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-Aminopyridine
Molecular Weight	94.12
Chemical structure	
Molecular Formula	$C_5H_6N_2$
CAS Number	504-24-5
PubChem identifier	1727
SMILES	C1=CN=CC=C1N
InChi	InChI=1S/C5H6N2/c6-5-1-3-7-4-2-5/h1-4H,(H2,6,7)
InChiKey	NUKYPUAOHBNCPY-UHFFFAOYSA-N
MDL number	MFCD00006439
Appearance	White solid

References

4-Aminopyridine ameliorates mobility but not disease course in an animal model of multiple sclerosis.

Göbel K *et al* (2013) Exp Neurol 248
PubMedID 23748135

Identification of selective inhibitors of the potassium channel Kv1.1-1.2((3)) by high-throughput virtual screening and automated patch clamp.

Wacker SJ *et al* (2012) ChemMedChem 7(10)
PubMedID 22473914

Temporal lobe epileptiform activity following systemic administration of 4-aminopyridine in rats.

Lévesque M *et al* (2013) Epilepsia 54(4)
PubMedID 23521339

Different state dependencies of 4-aminopyridine binding to rKv1.4 and rKv4.2: role of the cytoplasmic halves of the fifth and sixth transmembrane segments.

Tseng GN (1999) J Pharmacol Exp Ther 290(2)
PubMedID 10411564