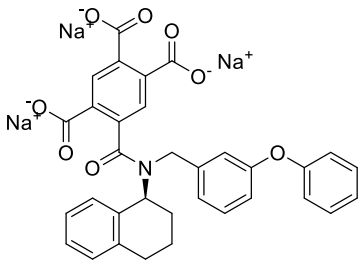
Product data sheet

MedKoo Cat#: 526701 Name: A-317491 sodium CAS#: Unknown (sodium) Chemical Formula: $C_{33}H_{24}NNa_3O_8$ Exact Mass: 565.1737 Molecular Weight: 631.1195	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
A-317491 is a potent and selective non-nucleotide antagonist of P2X3 and P2X2/3 receptors. A-317491 transiently attenuates cancer-induced bone pain in mice. A-317491 reverses inflammatory mechanical hyperalgesia through action at peripheral receptors in rats. A-317491 reduces chronic inflammatory and neuropathic pain in the rat.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	60.95	96.57

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.58 mL	7.92 mL	15.84 mL
5 mM	0.32 mL	1.58 mL	3.17 mL
10 mM	0.16 mL	0.79 mL	1.58 mL
50 mM	0.03 mL	0.16 mL	0.32 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

TBD

In vivo study

1. Yi Z, Rao S, Ouyang S, Bai Y, Yang J, Ma Y, Han X, Wu B, Zou L, Jia T, Zhao S, Hu X, Lei Q, Gao Y, Liu S, Xu H, Zhang C, Liang S, Li G. A317491 relieved HIV gp120-associated neuropathic pain involved in P2X3 receptor in dorsal root ganglia. Brain Res Bull. 2017 Apr;130:81-89. doi: 10.1016/j.brainresbull.2017.01.002. Epub 2017 Jan 5. PMID: 28065732.
2. Hansen RR, Nasser A, Falk S, Baldvinsson SB, Ohlsson PH, Bahl JM, Jarvis MF, Ding M, Heegaard AM. Chronic administration of the selective P2X3, P2X2/3 receptor antagonist, A-317491, transiently attenuates cancer-induced bone pain in mice. Eur J Pharmacol. 2012 Aug 5;688(1-3):27-34. doi: 10.1016/j.ejphar.2012.05.008. Epub 2012 May 22. PMID: 22634164.

7. Bioactivity
Biological target:

Selective, high affinity P2X3 and P2X2/3 antagonist.

In vitro activity

TBD

Product data sheet

In vivo activity

$P2X_3$ agonist-activated currents in the DRG neurons were recorded by whole cell patch clamp. The experimental results revealed that the $P2X_3$ agonist α,βme-ATP (10 μM)-activated currents in DRG neurons cultured with gp120 were higher than those in controls (Fig. 4A). The inhibitory effect of A317491 on α,βme-ATP-induced currents in DRG rat neurons cultured with gp120 was larger than that for control (Fig. 4B) ($n = 8$, $p < 0.01$). These results further support the opinion that the activation of $P2X_3$ receptor may be involved in HIV-associated neuropathic pain.

Reference: Brain Res Bull. 2017 Apr;130:81-89. https://pubmed.ncbi.nlm.nih.gov/28065732/