(±)-Baclofen

Product Number  B 5399
Storage Temperature  2-8 °C

Product Description
Molecular Formula: C_{10}H_{12}ClNO_{2}
Molecular Weight: 213.7
CAS Number: 1134-47-0
Melting Point:  206-208 °C, 189-191 °C (varying reports)  

Synonyms: β-(aminomethyl)-4-chlorobenzenepropanoic acid; β-(aminomethyl)-p-chlorohydrocinnamic acid; γ-amino-β-(p-chlorophenyl)butyric acid, β-(4-chlorophenyl)-GABA

Baclofen is an analog of γ-aminobutyric acid (GABA) that interferes with excitatory neurotransmitter release in the central nervous system. It is also an inhibitor of monosynaptic and polysynaptic transmission in the spinal cord.  

Baclofen has been utilized at 5-10 µM in a patch clamp study of 69/85 periventricular parvocellular PVN cells to probe the role of pre- and postsynaptic GABA_B receptors in rapid neurotransmission. Under culture conditions, baclofen has been shown to stimulate Xenopus laevis retinal ganglion cell neurite outgrowth. Baclofen (20 µM) has been demonstrated to diminish the amplitude of glutamate-evoked postsynaptic potentials in CA1 pyramidal cells.

An HPLC method for the chiral separation of the R-(-)- and S-(+)-enantiomers of baclofen from plasma has been published.

Preparations and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in 1 M HCl (50 mg/ml), with heat as needed, yielding a clear to slightly hazy, colorless to faint yellow solution. It is also soluble in water (4.3 mg/ml, pH 7.6) and 1 M NaOH (20 mg/ml). This product is slightly soluble in alcohol and methanol, and essentially insoluble in acetone, chloroform, and ether.

Storage/Stability
Solutions of this product in dilute acid are stable for several weeks at 4 °C.

References
1. The Merck Index, 12th ed., Entry# 967.