

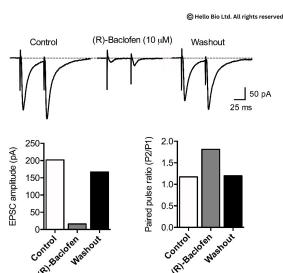
## DATASHEET

(R)-Baclofen

### Product overview

|                          |                                              |
|--------------------------|----------------------------------------------|
| <b>Name</b>              | (R)-Baclofen                                 |
| <b>Cat No</b>            | HB0952                                       |
| <b>Alternative names</b> | STX 209                                      |
| <b>Biological action</b> | Agonist                                      |
| <b>Purity</b>            | >98%                                         |
| <b>Description</b>       | Selective GABA <sub>B</sub> receptor agonist |

### Images



### Biological Data

#### Biological description

Active enantiomer of (RS)-Baclofen. Selective GABA<sub>B</sub> receptor agonist. Decreases ethanol intake in addiction models. Shows anti-cataplexy actions and promotes sleep. Blood-brain barrier permeable. The GABA<sub>B</sub> receptor agonist (R)-Baclofen is commonly used at concentrations of 1–50  $\mu$ M. It can be used to target presynaptic GABA<sub>B</sub> receptors to inhibit neurotransmitter release. At the Schaffer collateral pathway of the hippocampus, (R)-Baclofen from Hello Bio (applied at 10  $\mu$ M) led to a reversible reduction in presynaptic glutamate release. This was demonstrated as a reduced EPSC amplitude and increase in the amplitude ratio of a 50 ms paired pulse stimulation (see Fig 1 above).

#### Application notes

#### #Protocol 1: Assay evoked EPSCs (used for baclofen)

- Whole cell voltage clamp recordings of CA1 pyramidal neurons from the rat hippocampal brain slice.
- 50 ms paired EPSCs were evoked via stimulating electrode placed in the CA3 region to stimulate the Schaffer collateral pathway delivering two square (150  $\mu$ s) pulse with a 50 ms interval every 10 sec at an intensity that gave a reliable EPSC.
- Neurons were held at -60 mV (the reversal potential of GABA currents).
- Paired EPSCs were continually stimulated and recorded in response to applications of baclofen until a maximum effect was achieved at which point baclofen was washed out with control solution.
- EPSC amplitudes were taken from the amplitude of the first pulse and paired pulse ratios calculated by dividing the amplitude of pulse 2 by pulse 1 (P2/P1).

## Solubility & Handling

### Storage instructions

Room temperature

### Solubility overview

Soluble in water (20mM) and in DMSO (10mM)

### 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

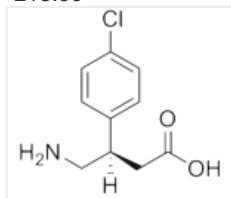
### Chemical name

(R)-4-Amino-3-(4-chlorophenyl)butanoic acid

### Molecular Weight

213.66

### Chemical structure



### Molecular Formula

C<sub>10</sub>H<sub>12</sub>ClNO<sub>2</sub>

### CAS Number

69308-37-8

### PubChem identifier

44602

### SMILES

C1=CC(=CC=C1[C@@H](CC(=O)O)CN)Cl

### InChi

InChI=1S/C10H12ClNO2/c11-9-3-1-7(2-4-9)8(6-12)5-10(13)14/h1-4,8H,5-6,12H2,(H,13,14)/t8-m/s1

### InChiKey

KPYSYYIEGFHWSV-QMMMGPBSA-N

### MDL number

MFCD01321057

### Appearance

White solid

## References

**Intra-nucleus accumbens shell injections of R(+)- and S(-)-baclofen bidirectionally alter binge-like ethanol, but not saccharin, intake in C57Bl/6J mice.**

Kasten CR *et al* (2014) Behav Brain Res 272

**PubMedID** [25026094](#)

**Comparative stereostructure-activity studies on GABAA and GABAB receptor sites and GABA uptake using rat brain membrane preparations.**

Falch E *et al* (1986) J Neurochem 47(3)

**PubMedID** [3016189](#)

**GABAB agonism promotes sleep and reduces cataplexy in murine narcolepsy.**

Black SW *et al* (2014) J Neurosci 34(19)

**PubMedID** [24806675](#)