GenTarget Inc

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Blasticidin Antibiotic Solution

(Research Use Only, Not for Drug Use)

Cat#	Product Name	Amounts
B-anti	Blasticidin solution in PBS, cell culture ready	1.0 ml (**10 mg**/ml)

Storage: Upon received, it should be stored at 4°C-20°C. Stable for 6 months.

Product Description:

Blasticidin is a nucleoside antibiotic that is produced by *Streptomyces griseochromogenes*. It is used in cell biology as a selective agent to select transformed cells which have been engineered to carry a resistance gene for blasticidin.

It is toxic to prokaryotic and eukaryotic cells. Resistance to Blasticidin is conferred by BSD (the deaminase isolated from *Aspergillus terreus*) which is the most commonly used resistance gene to blasticidin. Cells transformed by plasmids that containing BSD gene will survive in Blasticidin selection, which is widely used in stable cell line generation.

Specification:

1) 0.22ul filter sterilized solution in PBS at 10 mg/ml stock, Cell culture tested.
2) Compound name: Blasticidin S Hydrochloride
3) CAS number: 589205
4) Cell-culture tested: toxicity and potency validated mammalian cell lines.
5) Formula: $C_{17}H_{26}N_8O_5$
6) Molecular weight: 458.9 g/mol
7) Safety consideration: this solution is provided for stable cell selection, and for research use only, not for drug use. Please refer to its MSDS file for handling instructions.
8) Structure:

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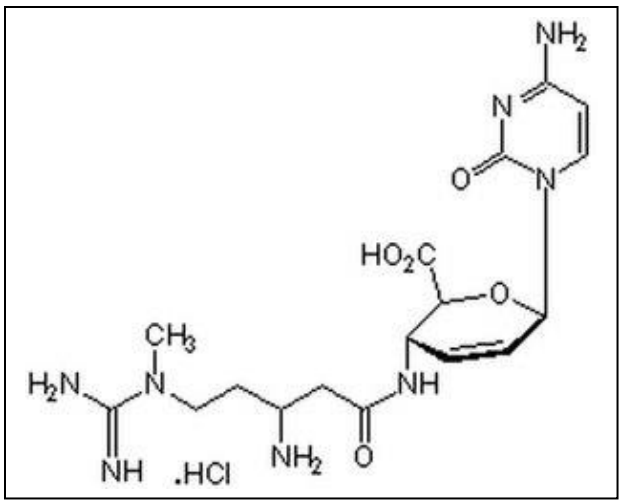

Working Concentrations:

The working concentration of antibiotic is dependent cell types and antibiotic's potency. It must be obtained from the killing curve test in your specific cell type. The optimal concentration is the minimal concentration that kill all your cells in the define time-course.

Blasticidin kills eukaryotic cells very fast, allowing for selection of transformed cell lines carrying a blasticidin resistance gene within one week. The recommended Blasticidin working concentration ranges from 1–10 µg/mL.

The working concentration of Gentarget's Blasticidin solution were tested in many mammalian cell types against Gentarget's lentivirus products containing corresponding antibiotic.

You can use the Blasticidin's working concentration listed below for the matched cell type.

Working Concentration for Stable Cell Selection

Cell Line	**Blasticidin** (CAT#: **B-anti**)
786-O cells (Human)	5
A549 (Human)	10

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CHO	10
CL-11 (Human)	2.5
CT26 (Mouse)	10
ES (embryonic stem)-2 (Human)	15
HaCat (Human)	10
HCT116 (Human)	10
HEK293 (Human)	10
HeLa (Human)	10
HL60S (Human)	2
Hsultans (Human)	>10
Human HT29	10
HT1080 (Human)	5
HT22 (mouse)	1.2
Jurkat (Human)	5
MIA-PaCa-2	5
MB49 (Mouse)	5
MCF10A cell (Human)	10
MCF-7 (Human)	2.5
MDA-MB-231 (Human)	5
Human MP41	1.2
Mouse Panc02	5
MP41 (Human)	1.2
panc-1 (Human)	10
PC3 (Human)	10
RAW 264.7 (Mouse)	1

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RKO (Human)	10
SHP-77 (Human)	2.0
SK-MEL-5 (Human)	2.5
SW1990 (Human)	10
T47D cell (Human)	30
ZR-75-1 (Human)	10
U2-OS (Human)	5

*: Note: The working concentration above is provided as reference. You may test the killing curve for your cell culture conditions using following protocol.

Antibiotic Selection protocol:

Day 0:

Seed cells in complete medium at the appropriate density and incubate overnight in 24 well/plate.

Note: at the time of selection, cells should be 50%-75% confluent.

Day 1:

- Thaw Blasticidin solution at 37°C. Under biological hood (sterilized condition), mix via pipetting to make sure it is in fully clear solution, no pellet left.
- Make series dilution of Blasticidin from 1 ug/ml to 20 ug/ml final concentration in your complemented medium.
- Remove the culture medium from the cell wells, and add 0.5ml of Blasticidin containing medium (with the series diluted concentration) at each well.
- Return cells to grow in incubator.

Day 5~7:

Observe the cell death (detached or shirked) in each well. The optimal concentration is the minimal concentration that kill all cells in that well.

Then, use this optimal concentration to select your Blasticidin-resistant stable cells in target wells where a Blasticidin resistant plasmid was transfected. Remember to set up the controls without transduction where all cells should be died after the selection.

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Safety Precaution:

This antibiotic solution is provided for research use only, not for drug use, or clinical use. Please refer to SDS file for handling this harmful material.