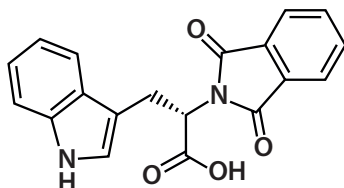


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## 1. Description

<b>Components</b>	StemMACS™ RG108. A small molecule DNA methyltransferase inhibitor.
<b>Size</b>	10 mg
<b>Product format</b>	Off-white solid
<b>Molecular weight</b>	334.44
<b>CAS number</b>	48208-26-0
<b>Systematic name</b>	(S)-2-(1,3-Dioxo-1,3-dihydro-2H-indol-2-yl)-3-(1H-indol-3-yl)propanoic acid
<b>Molecular formula</b>	C <sub>19</sub> H <sub>14</sub> N <sub>2</sub> O <sub>4</sub>
<b>Structure</b>	



<b>Purity</b>	>99%
<b>Solubility</b>	Soluble in DMSO and ethanol
<b>Storage</b>	Store powder at -20 °C. After reconstitution, store aliquots at -20 °C. Protect from light.

### 1.1 Background information

StemMACS™ RG108 is a cell permeable and selective inhibitor of DNA methyltransferase (DNMT). RG108 is a non-nucleoside inhibitor that binds non-covalently and reversibly to the active center (IC<sub>50</sub> = 115 nM). It has been used as an epigenetic modifier that induces DNA demethylation and reactivation of silenced tumor suppressor genes. In pluripotent stem cell research, RG108 can enhance reprogramming efficiency.

## 2. Protocol

### 2.1 Preparation of stock solution

Effective concentrations of StemMACS™ RG108 for cell culture applications range from 20 μM to 500 μM. A 10 mM stock solution in DMSO will be appropriate for most applications and can be prepared as follows:

1. Reconstitute the entire vial contents by adding 2.99 mL of pure DMSO. Warm to 37 °C for 3–5 minutes to facilitate solubilization.

▲ **Note:** The vial may have turned upside down during transportation. Gently tap prior to reconstitution to collect all powder at the bottom of the vial.

2. Prepare appropriate aliquots and store at -20 °C. Avoid repeated freeze-thaw cycles.

▲ **Note:** The DMSO concentration in culture should not exceed 0.5%. Stock solutions of alternate concentration can be prepared using the following table. Add the solvent directly to the vial, it will hold up to 4 mL.

Desired stock	10 mM	20 mM
Volume of DMSO to add	2990 μL	1495 μL

### 2.2 Use in cell culture

1. Thaw aliquots at 37 °C as needed.
2. To avoid precipitation, prewarm the cell culture media prior to adding the reconstituted compound.
3. Mix and filter the supplemented media through a 0.2 μM low-protein binding filter.

Refer to [www.miltenyibiotec.com](http://www.miltenyibiotec.com) for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit [www.miltenyibiotec.com/local](http://www.miltenyibiotec.com/local) to find your nearest Miltenyi Biotec contact.

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