

# Bendamustine (hydrochloride)

Catalog No: tcsc1771



## Available Sizes

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg



## Specifications

**CAS No:**

3543-75-7

**Formula:**

$C_{16}H_{22}Cl_3N_3O_2$

**Pathway:**

Cell Cycle/DNA Damage

**Target:**

DNA Alkylator/Crosslinker

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 30$  mg/mL (76.00 mM)

**Alternative Names:**

SDX-105;EP-3101

**Observed Molecular Weight:**

394.72

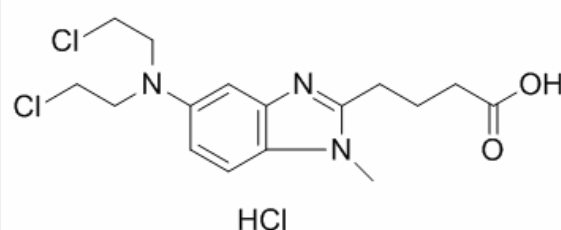
## Product Description

Bendamustine hydrochloride is a **DNA cross-linking** agent that causes DNA breaks, with alkylating and antimetabolite properties.

IC50 & Target: DNA Alkylator/Crosslinker<sup>[1]</sup>

**In Vitro:** Bendamustine hydrochloride is a DNA cross-linking agent that causes DNA breaks, with alkylating and antimetabolite properties. Bendamustine uniquely regulates apoptosis pathways and DNA repair pathways in non-Hodgkin's lymphoma cells. Bendamustine (50  $\mu$ M) induces p21 (Cip1/Waf1) and NOXA genes, and increases the expression of p53 in SU-DHL-1 cells. Bendamustine (25  $\mu$ M) blocks mitotic checkpoints and causes mitotic catastrophe<sup>[1]</sup>. Bendamustine reduces the viability of multiple myeloma (MM) cell lines, such as RPMI-8226 and 8226-LR5 cells, with IC<sub>25</sub>s of 101.8 and 585.5  $\mu$ M after 24 h incubation, and 51.7 and 374.3  $\mu$ M after 48 h incubation, respectively. Bendamustine induces a specific caspase-dependent MM cell death and inhibits the spindle-assembly checkpoint<sup>[2]</sup>.

**In Vivo:** Bendamustine (25 mg/kg, i.v.) shows potent inhibition on the growth of tumor cells by 91%, 99% and 95% for DoHH-2, Granta 519 and RAMOS models, respectively. Moreover, the antitumor effect of Bendamustine is enhanced by rituximab in DoHH-2 and RAMOS models, but not in Granta 519 model<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!