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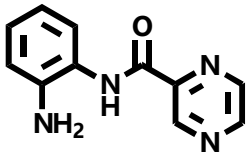
# HDAC3 Inhibitor – BG45

**Chemical Name:** N-(2-aminophenyl)pyrazine-2-carboxamide



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|---|---|
| Molecular Weight: | 214.22 |
| Formula: | $C_{11}H_{10}N_4O$ |
| Purity: | ≥98% |
| CAS#: | 926259-99-6 |
| Solubility: | DMSO up to 100 mM |
| Storage | Powder: 4 °C 1 year<br>DMSO: 4 °C 3 months<br>-20 °C 1 year |

**Biological Activity:**

BG45 is a potent, selective and cell permeable HDAC3 inhibitor. It inhibits HDAC3 with $IC_{50}$ of 289 nM. It has $IC_{50}$ of 2.0 μM, 2.2 μM and >20 μM for HDAC1, HDAC2, and HDAC6 in cell-free assays, respectively. BG45 triggers significant MM cell growth inhibition via apoptosis, evidenced by caspase and poly (ADP-ribose) polymerase cleavage. BG45 alone and in combination with bortezomib triggers significant tumor growth inhibition in vivo in a murine xenograft model of human MM.

**How to Use:**

**In vitro:** BG45 was used at 10 μM final concentration in various in vitro assays.

**In vivo:** BG45 was dosed to mice bearing MM.1S xenograft by IP injection at 50 mg/kg (5 days a week), significantly inhibits MM tumor growth. (Formulation: 10% dimethylacetamide in 10% Kolliphor HS15 in PBS)

**Reference:**

1. Minami J., et al. Histone deacetylase 3 as a novel therapeutic target in multiple myeloma. (2014) Leukemia. 28(3): 680-9.