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**Product Data Sheet**

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Product Name: Ro 31-9790 (GI4747)

Cat. No.: GC33881

**Chemical Properties**

Cas. No. 145337-55-9

SMILES O=C(N[C@H](C(NC)=O)C(C)(C)C)[C@H](CC(C)C)CC(NO)=OFormula C15H29N3O4 M.Wt 315.41

Solubility DMSO : 50 mg/mL (158.52 mM; Need ultrasonic (&lt;70°C)) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Protocol**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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**Cell experiment:**

For mouse and human lymphocytes and Jurkat T cells, 100% inhibition is set as the percentage of cells positive for L-selectin in an untreated sample (after flow cytometric analysis) or the concentration of soluble L-selectin in the supernatant of an untreated cell sample (after ELISA); 0% inhibition is set at the appropriate value for a PMA-treated sample. For results from human monocytes, a different calculation is needed to allow direct comparison of L-selectin and TNF- $\alpha$  shedding. Therefore, in this case 100% inhibition is set as the percentage of cells positive for L-selectin in the presence of PMA+50  $\mu$ M Ro 31-9790 or the percentage of cells positive for cell surface TNF- $\alpha$  in the presence of LPS+50  $\mu$ M Ro 31-9790 (doses of Ro 31-9790 which gave maximal inhibition); 0% inhibition is set as the percentage of cells positive for L-selectin or TNF- $\alpha$  in the presence of PMA or LPS, respectively. Intermediate percent inhibition is calculated. The IC<sub>50</sub> value for inhibitor in each system is defined as the concentration of inhibitor which gave 50% inhibition, where 100% inhibition is set as the percentage of cells positive for L-selectin or cell surface TNF- $\alpha$  in the presence of Phorbol myristate acetate (PMA)+50  $\mu$ M Ro 31-9790 or Lipopolysaccharide (LPS)+50  $\mu$ M Ro 31-9790, respectively (doses of Ro 31-9790 which gave maximal inhibition) and 0% inhibition is set as the percentage of cells positive for L-selectin or TNF- $\alpha$  in the presence of PMA or LPS alone, respectively[1].

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### References:

[1]. Borland G, et al. Tissue inhibitor of metalloproteinases-3 inhibits shedding of L-selectin from leukocytes. J Biol Chem. 1999 Jan 29;274(5):2810-5.

### Background

Ro 31-9790 is a synthetic metalloproteinase (MMP) inhibitor.

Ro 31-9790 inhibits L-selectin shedding from mouse and human lymphocytes, Jurkat T cells, and human monocytes with an IC<sub>50</sub> of 0.3-0.4 μM on these cell types. The IC<sub>50</sub> values obtained for Ro 31-9790 are 4.82 ± 0.75 μM, 1.16 ± 0.27 μM, 0.70 ± 0.06 μM, 4.47 ± 1.27 μM and 0.38 ± 0.05 μM for mouse lymphocyte L-selectin shedding, Jurkat L-selectin shedding, human lymphocyte L-selectin shedding, human monocyte L-selectin shedding and human monocyte TNF-α shedding[1].

[1]. Borland G, et al. Tissue inhibitor of metalloproteinases-3 inhibits shedding of L-selectin from leukocytes. J Biol Chem. 1999 Jan 29;274(5):2810-5.

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