

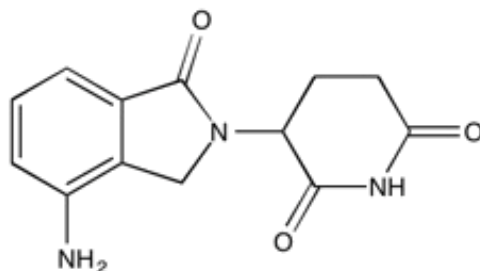
**Catalog # 10-2148**

**Lenalidomide**

CAS# 191732-72-6

(R,S)-3-(4-Amino-1-oxo-3H-isoindol-2-yl)piperidine-2,6-dione

Lot # X105216



Thalidomide analog which, like thalidomide,<sup>1</sup> binds to cereblon which is the substrate recognition component of a cullin-dependent ubiquitin ligase and inhibits its autoubiquitination activity<sup>2</sup>. Induces degradation of T-cell repressors Ikaros (IKZF1) and Aiolos (IKZF3) leading to T cell activation.<sup>2</sup> Selective inhibition of IKZF1 and IKZF3 in multiple myeloma cells results in cell death.<sup>3,4</sup> Cell permeable. Caution: Teratogenic

- 1) Ito *et al.* (2010), *Identification of a primary target of thalidomide teratogenicity*; *Science*, **327** 1345
- 2) Gandhi *et al.* (2014), *Immunomodulatory agents lenalidomide and pomalidomide co-stimulate T cells by inducing degradation of T-cell repressors Ikaros and Aiolos via modulation of the E3 ubiquitin ligase complex CRL4(CRBN)*; *Br.J. Haematol.*, **164** 811
- 3) Kronke *et al.* (2014), *Lenalidomide causes selective degradation of IKZF1 and IKZF3 in multiple myeloma cells*; *Science*, **343** 301
- 4) Lu *et al.* (2014), *The myeloma drug lenalidomide promotes the cereblon-dependent destruction of Ikaros proteins*; *Science.*, **343** 305

**PHYSICAL DATA**

Molecular Weight:	259.26
Molecular Formula:	C <sub>13</sub> H <sub>13</sub> N <sub>3</sub> O <sub>3</sub>
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied, desiccated at room temperature for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**