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Cereblon Modulator CC-90009

National Cancer Institute

Source

National Cancer Institute. *Cereblon Modulator CC-90009*. NCI Thesaurus. Code C131177.

A modulator of cereblon (CRBN), which is part of the cullin 4-RING E3 ubiquitin ligase complex (CUL4-CRBN E3 ubiquitin ligase; CUL4-CRBN E3 ubiquitin ligase), with potential immunomodulating and pro-apoptotic activities. Upon administration, CC-90009 specifically binds to CRBN, thereby affecting the activity of the ubiquitin E3 ligase complex. This leads to the ubiquitination of certain substrate proteins and induces the proteasome-mediated degradation of certain transcription factors, including Ikaros (IKZF1) and Aiolos (IKZF3), which are transcriptional repressors in T-cells. This reduces the levels of these transcription factors, and modulates the activity of the immune system, which may include the activation of T-lymphocytes. In addition, this downregulates the expression of other proteins, including interferon regulatory factor 4 (IRF4) and c-myc, which plays a key role in the proliferation of certain cancer cell types. CRBN, the substrate recognition component of the E3 ubiquitin ligase complex, plays a key role in the ubiquitination of certain proteins.