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Iberdomide

National Cancer Institute

Source

National Cancer Institute. *Iberdomide*. NCI Thesaurus. Code C129048.

A modulator of the E3 ubiquitin ligase complex containing cereblon (CRL4-CRBN E3 ubiquitin ligase), with immunomodulating and pro-apoptotic activities. Upon administration, iberdomide specifically binds to the cereblon (CRBN) part of the ligase complex, thereby affecting the ubiquitin E3 ligase activity, and targeting certain substrate proteins for ubiquitination. This induces the proteasome-mediated degradation of certain transcription factors, including Ikaros (IKZF1) and Aiolos (IKZF3) which are transcriptional repressors in T-cells. This leads to a reduction of their protein levels, and the modulation of the immune system, including activation of T-lymphocytes. In addition, this leads to a downregulation of other proteins, including interferon regulatory factor 4 (IRF4), 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.