

[Open Peer Review on Qeios](#)

# Carbon C 14-labeled Ixazomib

National Cancer Institute

## Source

National Cancer Institute. *Carbon C 14-labeled Ixazomib*. NCI Thesaurus. Code C111566.

A radioconjugate comprised of the orally available reversible 20S proteasome inhibitor ixazomib and labeled with the isotope carbon C 14. Upon administration, the ixazomib moiety hydrolyzes and generates its active form, MLN2238, which inhibits the activity of the 20S catalytic core subunit of the proteasome. This blocks the targeted proteolysis normally performed by the proteasome, which results in an accumulation of unwanted or misfolded proteins. The accumulation of protein may disrupt various cell signaling pathways, induce apoptosis, and inhibit tumor growth. In addition, this agent targets tumor suppressor microRNA-33b (miR-33b). Labeling with the radioactive tracer carbon C 14 allows for evaluation of ixazomib's absorption, distribution, metabolism and excretion (ADME).