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# RORgamma Agonist LYC-55716

National Cancer Institute

## Source

National Cancer Institute. *RORgamma Agonist LYC-55716*. NCI Thesaurus. Code C131294.

An orally bioavailable agonist of retinoic acid-related orphan receptor gamma (RORγ), with potential immunomodulatory and antineoplastic activities. Upon oral administration of RORγ agonist LYC-55716, this agent selectively binds to the nuclear receptor transcription factor RORγ, forming a receptor complex that translocates to the nucleus, and binds to ROR response elements (ROREs), enhancing the function, proliferation and survival of type 17 T-cells, including Th17 (helper T-cells) and Tc17 (cytotoxic T-cells). This may increase the expression of co-stimulatory molecules and decrease the expression of co-inhibitory molecules on T-cells leading to increased production of cytokines and chemokines by T-cells, decreased proliferation of regulatory T-cells (Tregs), and abrogation of tumor-induced immunosuppression. This ultimately induces a T-cell-mediated immune response against cancer cells and leads to a reduction in tumor cell growth. RORγ, the nuclear receptor transcription factor that is involved in Th17/Tc17 differentiation, plays a key role in immune activation.