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JAK3 Inhibitor PF-06651600

National Cancer Institute

Source

National Cancer Institute. *JAK3 Inhibitor PF-06651600*. NCI Thesaurus. Code C161783.

An orally available small-molecule inhibitor of tyrosine-protein kinase JAK3 (Janus kinase 3; JAK3) with potential immunomodulatory and anti-inflammatory activities. Upon administration, JAK3 inhibitor PF-06651600 selectively and irreversibly binds to JAK3 and prevents the activation of the JAK-signal transducers and activators of transcription (STAT) signaling pathway. This may decrease the production of certain pro-inflammatory cytokines and prevent both an inflammatory response and the inflammation-induced damage caused by certain immunological diseases. By selectively targeting JAK3, PF-06651600 may spare interleukin (IL)-6 signaling, as well as other JAK1-dependent immunoregulatory cytokines such as IL-10, IL-27, and IL-35, which may offer a safety benefit compared to non-selective JAK inhibitors. JAK kinases are intracellular enzymes involved in signaling pathways affecting hematopoiesis, immunity and inflammation.