Lexaptepid Pegol

National Cancer Institute

Source

National Cancer Institute. Lexaptepid Pegol. NCI Thesaurus. Code C103195.

A proprietary 44-nucleotide L-stereoisomer RNA oligonucleotide conjugated to a 40 kDa polyethylene glycol (PEG) that targets hepcidin with potential anti-anemic activity. Upon intravenous or subcutaneous administration, lexaptepid pegol binds to hepcidin and prevents it from binding to the iron channel ferroportin, located on the basolateral surface of gastrointestinal enterocytes and the plasma membrane of macrophages. This prevents hepcidin-induced internalization and degradation of ferroportin, thus decreasing macrophage iron retention. In turn, binding of NOX-H94 to hepcidin normalizes plasma iron levels and increases erythropoiesis. This may inhibit anemia caused by inflammation. Hepcidin, a peptide hormone that plays a key role in the homeostasis of systemic iron, is upregulated during acute and chronic inflammation in response to cytokines. The unique mirror-image configuration of this agent renders it resistant to hydrolysis and shows a low antigenicity profile. Pegylation increases the half-life of this agent.