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# PEG-Proline-Interferon Alfa-2b

National Cancer Institute

## Source

National Cancer Institute. *PEG-Proline-Interferon Alfa-2b*. NCI Thesaurus. Code C111892.

A long-acting formulation of recombinant interferon alpha subtype 2b (IFN-a2b) protein, in which IFN-a2b is coupled, via proline, to polyethylene glycol (PEG), with antiviral, immunomodulating and antineoplastic activities. Upon subcutaneous administration, IFN-a2b binds to specific interferon cell-surface receptors. This activates interferon-mediated signal transduction pathways and induces the transcription and translation of genes with interferon-specific response elements (ISREs); the protein products mediate antiviral, antiproliferative, anticancer, and immune-modulating effects. The PEG moiety inhibits proteolytic breakdown and clearance of IFN-a2b, which prolongs its half-life, extends the duration of its therapeutic effects and allows less frequent dosing. The proline linker facilitates the synthesis of a predominant (90%) positional isomer which allows for further increases in stability and a longer half-life than previous PEG conjugates.