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Burosumab

National Cancer Institute

Source

National Cancer Institute. *Burosumab*. NCI Thesaurus. Code C119744.

An orally bioavailable recombinant human immunoglobulin G1 monoclonal antibody directed against human fibroblast growth factor 23 (FGF23), that can be used to increase serum phosphate levels. Upon subcutaneous administration, burosumab binds to and inhibits FGF23, thereby interfering with FGF23 signaling. This increases tubular phosphate reabsorption, decreases excretion of phosphate, and increases serum phosphate levels, resulting in enhanced bone mineralization. FGF23, a member of the fibroblast growth factor (FGF) family produced by osteocytes, plays a key role in hypophosphatemic rickets/osteomalacia, such as X-linked hypophosphatemia (XLH) and tumor-induced rickets/osteomalacia. Increased FGF23 levels lead to decreased expression of the sodium-phosphate co-transporters in the proximal tubules, reduced renal phosphate reabsorption, increased excretion by the kidneys, and low serum phosphate concentration.