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Tetracycline Hydrochloride

National Cancer Institute

Source

National Cancer Institute. *Tetracycline Hydrochloride*. NCI Thesaurus. Code C48020.

The hydrochloride salt of tetracycline, a broad-spectrum naphthacene antibiotic produced semisynthetically from chlortetracycline, an antibiotic isolated from the bacterium *Streptomyces aureofaciens*. In bacteria, tetracycline blocks binding of aminoacyl-tRNA to the mRNA-ribosome complex, thereby inhibiting protein synthesis and bacterial cell growth. Because naturally fluorescing tetracycline binds to newly formed bone at the bone/osteoid interface, tetracycline-labeling of bone and fluorescence microscopy may be used to perform bone histomorphometry.