

# Glycylcycline

Glycylcyclines represent a new group of antibiotics, that is derived from the tetracycline antibiotic minocycline. The main agent is **tigecycline**. Tigecycline is a broad-spectrum ATB (effective against Gram-negative, Gram-positive and anaerobic microbes, but not effective against pseudomonas and proteus). Tigecycline is a chemically *9-t-butylglycylamido derivative of minocycline*.

## Indications

They are indicated for complicated skin and soft tissue infections as well as intra-abdominal infections.

## Mechanism

Their mechanism of action is: inhibition of proteosynthesis, (blocking protein translation in bacteria by binding to **the 30S ribosomal subunit**, blocking the entry of aminoacyl-tRNA molecules into the A site of the ribosome).

## Antimicrobial spectrum

It is a **broad-spectrum antibiotic**, that acts on many clinically important bacteria. Both gram-positive, gram-negative, anaerobic and atypical, including some multidrug-resistant- penicillin resistant *Streptococcus pneumoniae*, *Klebsiella pneumoniae* and *Escherichia coli*, *Staphylococcus aureus*. Of gram - negative bacteria it shows lower susceptibility with *Pseudomonas aeruginosa*, *Proteus mirabilis*, *Burkholderia cepacia* and *Stenotrophomonas maltophilia*.

## The side effects

The side effects are:

- nausea,
- vomiting,
- diarrhea.

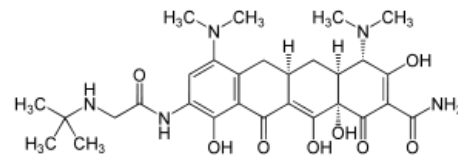
## Links

### Related articles

- Antibiotic for the treatment of staphylococcal infection
- Tetracycline antibiotics
- Antibiotic resistance

## References

- VOJTOVÁ, Vladimíra. Glycylcycliny - Nová skupina antibiotik. *Klin Farmakol Farm* [online]. -2008, roč. 3, vol. 22, s. 113-115, available on <<http://www.solen.cz/pdfs/far/2008/03/06.pdf>>. ISSN 1803-5353.



Tigecycline structure