Aprepitant

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Brand name: Emend®
IUPAC: 5-([(2R,3S)-2-((R)-1-[3,5-bis(trifluoromethyl)phenyl]ethoxy)-3-(4-fluorophenyl)morpholino]methyl)-1H-1,2,4-triazol-3(2H)-one
FDA approval: Yes
Manufacturer Link
Usage:

Aprepitant is used in combination with other drugs to the prevent nausea and vomiting associated with cytotoxic effects of chemotherapy. This drug works in the brain as opposed to other drugs, such as ondansetron (Zofran®), which works in the gut. For this reason, aprepitant is given most commonly as part of a three drug regimen that includes a drug like Zofran, which prevents nausea by acting the gut and a steroid. Aprepitant is administered in capsule form.

Mechanism:

Aprepitant blocks signals from NK1 receptors. The blocking of these signals decreases the likelihood of feeling nausea or vomiting.

The 3D diagram below shows the molecular structure of Aprepitant.

Stick Sphere Cross Rotate

Side effects:

Some common side effects include: tiredness, nausea, hiccups, constipation, diarrhea, loss of appetite. This drug may interact with other drugs, such as blood thinners and birth control pills, therefore patients should notify their doctors of all other medications they are taking. Also, it is important that patients using birth control pills should use a second form of contraception while taking this medication. 1

- 1Emend.. Prescribing Information. Merck & Company, Incorporated. May, 2016. [http://www.emend.com]