Atazanavir PK Fact Sheet

Details

**Generic Name**
Atazanavir

**Trade Name**
Reyataz®

**Class**
Protease Inhibitor

**Molecular Weight**
704.9 (free base), 802.9 (sulphate)

**Structure**

![Atazanavir Structure](attachment:Atazanavir_Structure.png)

Summary of Key Pharmacokinetic Parameters

**Linearity/non-linearity**
The pharmacokinetics of atazanavir exhibit a non-linear disposition.

**Plasma half life**
- 8.6 h (atazanavir/ritonavir 300/100 mg once daily)
- 6.5 h (400 mg once daily)

**Cmax**
- 4466 ng/ml (atazanavir/ritonavir 300/100 mg once daily)
- 2298 ng/ml (400 mg once daily)

**Cmin**
- 654 ng/ml (atazanavir/ritonavir 300/100 mg once daily)
- 120 ng/ml (400 mg once daily)

**AUC**
- 44185 ng.h/ml (atazanavir/ritonavir 300/100 mg once daily)
- 14874 ng.h/ml (400 mg once daily)

**Bioavailability**
~68%

**Absorption**
Atazanavir should be taken with food. Co-administration of atazanavir/ritonavir (300/100 mg single dose) with a light meal increased AUC by 33% and both Cmax and C24h by 40% relative to the fasting state. Co-administration with a high-fat meal did not affect atazanavir AUC relative to fasting conditions and Cmax was within 11% of fasting values. C24h following a high fat meal increased by ~33% due to delayed absorption; the median Tmax increased from 2.0 to 5.0 h. Administration of atazanavir/ritonavir with either a light or a high-fat meal decreased the coefficient of variation of AUC and Cmax by ~25% compared to the fasting state.

**Protein Binding**
~86%

**Volume of Distribution**
Not available

**CSF:Plasma ratio**
0.0021-0.0226

**Semen:Plasma ratio**
0.11-4.42

**Renal Clearance**
7% as unchanged drug

**Renal Impairment**
No pharmacokinetic data available on patients with renal insufficiency; the impact of renal impairment on atazanavir elimination is anticipated to be minimal.

**Hepatic Impairment**
Atazanavir with ritonavir should be used with caution in mild hepatic impairment and should not be used in patients with moderate to severe hepatic impairment.
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Metabolism and Distribution

<table>
<thead>
<tr>
<th>Metabolised by</th>
<th>CYP3A4</th>
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</thead>
<tbody>
<tr>
<td>Inducer of</td>
<td>P-gp expression and function, MRP1 expression[^1]</td>
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<tr>
<td>Inhibitor of</td>
<td>CYP3A4, UGT1A1, CYP2C8, BCRP*(in vitro)*[^2], P-gp, MRPs[^3], OATPs[^4]</td>
</tr>
<tr>
<td>Transported by</td>
<td>P-gp, MRPs, BCRP[^1]</td>
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</tbody>
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References

Unless otherwise stated (see below), information is from:
Reyataz® Summary of Product Characteristics, Bristol-Myers Squibb Pharmaceuticals Ltd.
Reyataz® US Prescribing Information, Bristol-Myers Squibb Co.


