

Draft Guidance on Fingolimod Hydrochloride

This draft guidance, when finalized, will represent the current thinking of the Food and Drug Administration (FDA, or the Agency) on this topic. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations. To discuss an alternative approach, contact the Office of Generic Drugs.

Active Ingredient: Fingolimod hydrochloride

Dosage Form; Route: Capsule; oral

Recommended Studies: Two studies

1. Type of study: Fasting
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 0.5 mg Base
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: 1. Ensure adequate washout periods between treatments in the crossover studies due to its long terminal elimination half-life. Consider using a parallel study design due to its long half-life. For long half-life drug products with low intra-subject variability in distribution and clearance, an AUC truncated to 72 hours may be used in place of AUC_{0-t} or $AUC_{0-\infty}$. For either a crossover or parallel study, sample collection time should be adequate to ensure completion of gastrointestinal transit of the drug product and absorption of the drug substance. Collect sufficient blood samples in the bioequivalence (BE) studies to adequately characterize the peak concentration (C_{max}) and time to reach peak concentration (T_{max}). 2. The study protocols and informed consent documents should include adequate information pertaining to the warnings and precautions as described in the approved drug label.

2. Type of study: Fed
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 0.5 mg Base
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: See comments above

Analytes to measure (in appropriate biological fluid): Fingolimod and its active metabolite, fingolimod-phosphate in whole blood

Submit the metabolite data as supportive evidence of comparable therapeutic outcome. For the metabolite, the following data should be submitted: individual and mean concentrations, individual and mean pharmacokinetic parameters, and geometric means and ratios of means for AUC and C_{max} .

Bioequivalence based on (90% CI): Fingolimod

Waiver request of in vivo testing: EQ 0.25 mg Base based on (i) acceptable BE studies on the EQ 0.5 mg strength, (ii) comparable dissolution testing on all strengths, and (iii) proportional similarity in the formulations of all strengths

Dissolution test method and sampling times: The dissolution information for this drug product can be found on the FDA-Recommended Dissolution Methods web site, available to the public at the following location: <http://www.accessdata.fda.gov/scripts/cder/dissolution/>. Conduct comparative dissolution testing on 12 dosage units each of all strengths of the test and reference products. Specifications will be determined upon review of the abbreviated new drug application (ANDA).