Modimelanotide

Also called: AP214; AP-214; ABT-719; ZP1480; ZP-1480; Modimelanotida

What it is

Modimelanotide (AP214, ABT-719) is alpha-MSH with six lysines added at its N-terminus, a melanocortin agonist that reduced kidney injury in septic mice and in pigs after renal ischaemia and acted through MC3 in mouse inflammation (PMIDs 18354376, 20172543, 21703408). In 240 patients having high-risk heart surgery, three intravenous dose regimens left kidney injury rates unchanged from placebo (PMID 27543797), and development stopped. It was never approved.

Approval status

Discontinued. Never approved. Drugs@FDA (openFDA) holds no application for modimelanotide, ABT-719 or AP214, and the European Medicines Agency's medicines and orphan-designation exports hold no record (both read November 4, 2026). AbbVie's 240-patient phase 2b trial found no reduction in kidney injury after cardiac surgery (PMID 27543797), and its second phase 2b trial, NCT01897519, was terminated in May 2014 for lack of efficacy.

Dosing, as printed in the page's Recommended Dosing box

Used in human trials

No manufacturer dose exists for this use: these are amounts given in published trials, not recommendations.

Protocol and source	Dose	Frequency	Duration	Route
Study: phase 2b, lowest dose arm **[Human study]** PMID 27543797	800 µg/kg in total (200, 400, 200 µg/kg)	Before incision, at aortic clamp release, 6 hours later	About 6 hours after clamp release	Intravenous infusion over 10 minutes
Study: phase 2b, middle dose arm **[Human study]** PMID 27543797	1,600 µg/kg in total (300, 600, 300, 200, 200 µg/kg)	Before incision, at clamp release, then 6, 12 and 24 hours later	24 hours after clamp release	Intravenous infusion over 10 minutes
Study: phase 2b, highest dose arm **[Human study]** PMID 27543797	2,100 µg/kg in total (300, 600, then four doses of 300 µg/kg)	Before incision, at clamp release, then 6, 12, 24 and 48 hours later	48 hours after clamp release	Intravenous infusion over 10 minutes

Educational information, not medical advice. Each dose above is tagged with its source: an approved label, a published human study, animal data, or amounts reported by users. None is a recommendation for you. An unapproved compound has no established safe or effective human dose, and products sold for "research use only" are not made or tested for people. Talk to a doctor before acting on anything on this site, including before you start, stop or change any medicine or dose.

Key human evidence

The 1 human study carded on the page (7 study cards in all):

• **Phase 2b in high-risk heart surgery: no effect on kidney injury** (Human, 2016). Adults with stable kidney function having high-risk on-pump cardiac surgery in the United States and Denmark were randomised, double-blind, to placebo (61) or a total of 800 (59), 1,600 (61) or 2,100 (59) micrograms per kilogram. Acute kidney injury by AKIN creatinine and urine-output criteria within 48 hours developed in 65.5%, 62.7% and 69.6% of the three drug groups and 65.5% of the placebo group, with no pairwise difference. Newer injury biomarkers, intensive care stay and 90-day outcomes did not differ, and adverse events were about as common in every group. **PMID 27543797**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 4, 2026, 0 records) found none in people. That is not evidence that it is safe to combine with anything.

Side effects and cautions

Reported side effects	Contraindications and cautions
• Adverse events occurred at similar rates on all three doses and on placebo in the 240-patient phase 2b trial (PMID 27543797) • No difference from placebo in intensive care stay or in the trial's 90-day outcomes (PMID 27543797) • Serious adverse events were recorded in 44% of the placebo group and in 21%, 22% and 48% of the lowest, middle and highest dose groups, and major cardiac events through 120 days in 5% to 7% of the first three groups and 12.5% of the highest dose group; the paper calls the safety profile broadly similar across groups (PMID 27543797, full text) • AbbVie's second phase 2b trial was stopped for lack of efficacy, with the registry stating there were no safety concerns (NCT01897519) • None of the papers read reports skin darkening, nausea or other effects known from melanocortin drugs; no study read was designed to look for them	• Not available: it was only ever given inside clinical trials and its development has stopped • Did not prevent kidney injury after heart surgery at any of three doses in the trial built to test it (PMID 27543797) • The animal benefit followed a bell-shaped curve in septic mice, so a higher dose was not a stronger one (PMID 18354376)

Five questions to ask

1. Modimelanotide is listed here as "Discontinued". What does the evidence on this sheet mean for someone in my situation, and is there an approved treatment I should consider instead?
2. Here are the medicines and supplements I take. Do any of them interact with Modimelanotide? This sheet records none published, which does not mean none exist.
3. Which side effects should make me stop and call you, for example adverse events occurred at similar rates on all three doses and on placebo in the 240-patient phase 2b trial?

4. Do any of the cautions on this sheet apply to me, such as: Not available: it was only ever given inside clinical trials and its development has stopped?
5. What should we check before I start and while I am on it (blood tests, blood pressure, weight), and how often?

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