



Casirivimab

Revised: November 15, 2023.

CASRN: 2415933-42-3

Drug Levels and Effects

Summary of Use during Lactation

The distribution of casirivimab and imdevimab was stopped in the US in January of 2022 because of a lack of efficacy against COVID-19 variants. Because casirivimab is a large protein molecule, the amount in milk is likely to be very low.[1] It is also likely to be partially destroyed in the infant's gastrointestinal tract and absorption by the infant is probably minimal.[2] Casirivimab is a monoclonal antibody given together with imdevimab. Both are directed against the SARS-CoV-2 virus that causes COVID-19. Casirivimab and imdevimab transiently increased anti-receptor-binding domain IgG titers in one woman.

Drug Levels

Maternal Levels. *Maternal Levels.* A nursing mother received the Pfizer-BioNTech COVID-19 vaccine about 1.8 months postpartum followed by the second dose in the primary series. From 60 day postpartum, she had a poor IgG antibody response against the receptor binding domain to the vaccine compared to a matched control woman. At day 216 postpartum, she tested positive for SARS-CoV-2 and on day 222, she received an intravenous infusion of casirivimab 600 mg and imdevimab 600 mg. Her milk anti-receptor-binding domain IgG titers increased markedly before returning to her baseline at about 560 days postpartum.[3]

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

An unvaccinated Japanese woman who was 36 weeks and 6 days pregnant developed COVID-19 and was given an intravenous dose of casirivimab and imdevimab (Ronapreve) for her COVID-19 infection. Her infant was born 5 days later and separated from her. Approximately 10 days after the dose, she began breastfeeding her infant. At 30 days of age, the infant was in good health.[4]

Effects on Lactation and Breastmilk

Relevant published information was not found as of the revision date.

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Alternate Drugs to Consider

Nirmatrelvir, Remdesevir

References

1. Stratigakis A, Paty D, Zou P, et al. A regression approach for assessing large molecular drug concentration in breast milk. *Reprod Breed* 2023;3:199-207. doi:10.1016/j.repbre.2023.10.003
2. Anderson PO. Monoclonal antibodies during breastfeeding. *Breastfeed Med* 2021;16:591-3. PubMed PMID: 33956488.
3. Marshall NE, Blanton MB, Doratt BM, et al. Monoclonal antibody therapy of breastfeeding patient infected with SARS-CoV-2: A case report. *Breastfeed Med* 2023;18:626-30. PubMed PMID: 37615569.
4. Ogawa E, Goto H, Ushimaru H, et al. Vaginal delivery after improvement in COVID-19 by monoclonal antibody treatment: A case report and literature review. *J Infect Chemother* 2022;28:982-6. PubMed PMID: 35288022.

Substance Identification

Substance Name

Casirivimab

CAS Registry Number

2415933-42-3

Drug Class

Breast Feeding

Lactation

Milk, Human

Antibodies, Monoclonal

Antibodies, Viral

Antiviral Agents