



Belimumab

Revised: October 23, 2019.

CASRN: 356547-88-1

Drug Levels and Effects

Summary of Use during Lactation

Only one report exists of belimumab use during breastfeeding. It is a large protein molecule with a molecular weight of 147,000, the amount in milk is likely to be very low and absorption is unlikely because it is probably destroyed in the infant's gastrointestinal tract. If belimumab is required by the mother, it is not a reason to discontinue breastfeeding.[1] Until more data become available, belimumab should be used with caution during breastfeeding, especially while nursing a newborn or preterm infant.

Belimumab is a human immunoglobulin G1 (IgG1) lambda antibody. Holder pasteurization (62.5 degrees C for 30 minutes) decreases the concentration of endogenous immunoglobulin G by up to 79%.[2][3] A study of 67 colostrum samples that underwent Holder pasteurization found that IgG amounts decreased by 34 to 40%. Specific IgG subclasses decreased by different amounts, with IgG1 activity decreasing by about 37%.[4] None of the studies measured IgG activity.

Drug Levels

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

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

Effects in Breastfed Infants

A woman with systemic lupus erythematosus was taking belimumab (dose not stated) for 1 year when she became pregnant. She received monthly belimumab infusions during pregnancy and continued postpartum, starting at 2 weeks postpartum. She breastfed her infant (extent not stated). No infant effects were mentioned.[6]

Effects on Lactation and Breastmilk

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

References

1. Gotestam Skorpen C, Hoeltzenbein M, Tincani A, et al. The EULAR points to consider for use of antirheumatic drugs before pregnancy, and during pregnancy and lactation. *Ann Rheum Dis*. 2016;75:795–810. PubMed PMID: 26888948.
2. Koenig A, de Albuquerque Diniz EM, Barbosa SF, et al. Immunologic factors in human milk: The effects of gestational age and pasteurization. *J Hum Lact*. 2005;21:439–43. PubMed PMID: 16280560.
3. Adhisivam B, Vishnu Bhat B, Rao K et al. Effect of Holder pasteurization on macronutrients and immunoglobulin profile of pooled donor human milk. *J Matern Fetal Neonatal Med*. 2018;1-4.. PubMed PMID: 29587541.
4. Rodriguez-Camejo C, Puyol A, Fazio L, et al. Impact of Holder pasteurization on immunological properties of human breast milk over the first year of lactation. *Pediatr Res*. 2019. PubMed PMID: 31288249.
5. Rodriguez-Camejo C, Puyol A, Fazio L, et al. Antibody profile of colostrum and the effect of processing in human milk banks: Implications in immunoregulatory properties. *J Hum Lact*. 2018;34:137–47. PubMed PMID: 28586632.
6. Danve A, Perry L, Deodhar A. Use of belimumab throughout pregnancy to treat active systemic lupus erythematosus: A case report. *Semin Arthritis Rheum*. 2014;44:195–7. PubMed PMID: 25005336.

Substance Identification

Substance Name

Belimumab

CAS Registry Number

356547-88-1

Drug Class

Breast Feeding

Lactation

Antibodies, Monoclonal

