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Canakinumab

Revised: December 3, 2018.

CASRN: 914613-48-2

Drug Levels and Effects

Summary of Use during Lactation

No information is available on the passage of canakinumab into breastmilk. Because canakinumab is a large protein molecule with a molecular weight of 145,157, 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. Until more data become available, canakinumab injection should be used with caution during breastfeeding, especially while nursing a newborn or preterm infant. Topical or homeopathic preparations pose little risk to the nursing infant.

Canakinumab is a human immunoglobulin G1 (IgG1) kappa antibody. Holder pasteurization (62.5 degrees C for 30 minutes) decreases the concentration of endogenous immunoglobulin G by up to 79%.[1][2] 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%.[3] 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

In an international multicenter study of mothers exposed to interleukin-1 receptor antagonists, 4 babies were breastfed (extent not stated) by mothers receiving regular canakinumab. It is unclear if mothers received the drug postpartum or only during pregnancy. There were no reported serious infections and no developmental abnormalities at a mean follow-up of 2.2 years (range 5 months to 4 years).[4]

Effects on Lactation and Breastmilk

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

References

1. 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.
2. 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.
3. 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.
4. Youngstein T, Hoffmann P, Gul A et al. International multi-centre study of pregnancy outcomes with interleukin-1 inhibitors. Rheumatology (Oxford). 2017;56:2102-8. PubMed PMID: 28968868.

Substance Identification

Substance Name

Canakinumab

CAS Registry Number

914613-48-2

Drug Class

Breast Feeding

Lactation

Antibodies, Monoclonal