



## Trastuzumab

Revised: June 30, 2019.

CASRN: 180288-69-1

## Drug Levels and Effects

### Summary of Use during Lactation

No information is available on the clinical use of trastuzumab during breastfeeding. Because trastuzumab is a large protein molecule with a molecular weight of 145,531, 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, trastuzumab should be used with caution during breastfeeding, especially while nursing a newborn or preterm infant.[1] The manufacturer recommends that breastfeeding be discontinued during trastuzumab therapy and for 7 months after the last dose.

Trastuzumab 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%.[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

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

### Effects on Lactation and Breastmilk

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

## References

1. Pistilli B, Bellettini G, Giovannetti E G et al. Chemotherapy, targeted agents, antiemetics and growth-factors in human milk: How should we counsel cancer patients about breastfeeding? *Cancer Treat Rev.* 2013;39:207-11. PubMed PMID: 23199900.
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. 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.

## Substance Identification

### Substance Name

Trastuzumab

### CAS Registry Number

180288-69-1

### Drug Class

Breast Feeding

Lactation

Antibodies, Monoclonal

Antineoplastic Agents



