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Monalizumab

National Cancer Institute

Source

National Cancer Institute. *Monalizumab*. NCI Thesaurus. Code C120208.

A humanized immunoglobulin G4 (IgG4) monoclonal antibody against the human natural killer (NK) and T-lymphocyte cell checkpoint inhibitor killer cell lectin-like receptor subfamily C member 1 (NKG2A), with potential antineoplastic activity. Upon administration, monalizumab binds to NKG2A and prevents the binding of NKG2A to its ligand human leukocyte antigen-E (HLA-E), which is overexpressed on tumor cells. This blocks the HLA-E-mediated inhibition of NKG2A-positive infiltrating NK and cytotoxic T-lymphocytes (CTLs) and induces a NK and CTL-mediated immune response against the cancer cells leading to their destruction. Human NKG2A, an inhibitory cell surface receptor covalently bound to CD94, is expressed by NK cells and CTLs. Stimulation of the CD94/NKG2A complex inhibits the cytotoxic activity of these cells. HLA-E, a nonclassical HLA class Ib molecule, is often overexpressed on tumor cells and is associated with poor prognosis.