

Tremelimumab Biosimilar, Human CTLA-4 monoclonal antibody

Catalog No.: YR0102

Basic Information

Molecular Weight

150 kDa

Endotoxin

<1EU/mg (<0.001EU/μg) Determined by LAL gel clotting assay

Sterility

0.2 μm filtration

Aggregation

<5% Determined by SECP

Purity

>95% Determined by SDS-PAGE

Background

What is Tremelimumab biosimilar research grade? Tremelimumab (formerly ticilimumab) is a fully human monoclonal antibody against CTLA-4 / CD152. It is an immune checkpoint blocker. Unlike Ipilimumab (another fully human anti-CTLA-4 / CD152 monoclonal antibody), which is an IgG1 isotype, tremelimumab is an IgG2 isotype. Tremelimumab Biosimilar uses the same protein sequences as the therapeutic antibody tremelimumab. Tremelimumab aims to stimulate an immune system attack on tumors. Cytotoxic T lymphocytes (CTLs) can recognize and destroy cancer cells. However, there is also an inhibitory mechanism (immune checkpoint) that interrupts this destruction. Tremelimumab turns off this inhibitory mechanism and allows CTLs to continue to destroy the cancer cells. This is immune checkpoint blockade. Tremelimumab binds to the protein CTLA-4 / CD152, which is expressed on the surface of activated T lymphocytes and inhibits the killing of cancer cells. Tremelimumab blocks the binding of the antigen-presenting cell ligands B7.1 and B7.2 to CTLA-4 / CD152, resulting in inhibition of B7-CTLA-4-mediated downregulation of T-cell activation; subsequently, B7.1 or B7.2 may interact with another T-cell surface receptor protein, CD28, resulting in a B7-CD28-mediated T-cell activation unopposed by B7-CTLA-4-mediated inhibition.

Reported Applications

ELISA, neutralization, functional assays such as bioanalytical PK and ADA assays, and those assays for studying biological pathways

Immunogen Information

Clone

Tremelimumab

Isotype

human IgG2 kappa

Immunogen

Human CTLA-4

Recommended Isotype Control(s)

In Vivo Grade Recombinant Human IgG4-S228P Kappa Isotype Control Antibody

Recommended Dilution Buffer

1×PBS pH 7.0

Contact

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Product Information

Production

Purified from cell culture supernatant in an animal-free facility

Purification

Protein A or G purification

Storage

2 - 8°C for up to 4 weeks and -80°C for long term storage (Avoid repeated freezing and thawing)