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Human IL-17A (Secukinumab) Antibody

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.: I-1210
Clone: AIN457
Isotype: Human IgG1κ
Storage: Sterile 2 to 8°C

Product Description

Specificity:
This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Secukinumab. This product is for research use only. Secukinumab activity is directed against IL-17A.

Antigen Distribution:
IL-17A is expressed by Th17 cells, mast cells, and neutrophils.

Background:
IL-17 is a group of proinflammatory cytokines (IL-17A to IL-17F) released by T helper 17 (Th17) cells[1]. IL-17A is the key effector cytokine of the group[1] and is involved in normal inflammatory and immune responses[2]. Additionally, increased IL-17A plays an important role in the pathogenesis of ankylosing spondylitis (AS), a chronic autoimmune inflammatory disease that primarily affects the axial skeleton[2], and in the progression of psoriatic arthritis[1].

Secukinumab is a fully humanized monoclonal antibody that binds selectively to IL-17A and inhibits its interaction with the IL-17 receptor, thereby inhibiting the release of proinflammatory cytokines and chemokines[2]. Secukinumab was developed as an IL-17A inhibitor for the treatment of AS and has been approved for the treatment of AS, plaque psoriasis, and psoriatic arthritis. In AS, the levels of a variety of biomarkers (CRP, S100A8, and S100A9) decrease with secukinumab treatment along with symptoms.

Secukinumab was generated in transgenic mice engineered to express the human IgG/κ repertoire in lieu of the murine immunoglobulin repertoire using recombinant human IL-17 as immunogen[3]. Murine hybridoma cells were obtained that secrete the human IgG/κ antibody and selection for activity against IL-17A was performed.

Secukinumab may have significant cross-reactivity with IL-17F, depending on the chosen experimental conditions[5].

Known Reactivity Species:
Human

Expression Host:
HEK-293 Cells

Format:
Purified No Carrier Protein

Immunogen:
Humanized antibody derived from mouse clone 2321

Formulation
This biosimilar antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

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Purity
≥95% by SDS Page, ≥95% monomer by analytical SEC

Endotoxin
< 1.0 EU/mg as determined by the LAL method

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2° to 8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles.

Product Preparation
Recombinant biosimilar antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Pathogen Testing
To protect mouse colonies from infection by pathogens and to assure that experimental preclinical data is not affected by such pathogens, all of Leinco's recombinant biosimilar antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Other Applications Reported in Literature:
ELISA,
FA,
IF,
IHC,
FC

Country of Origin
USA

References
1) Aboobacker S, Kurn H, Al Aboud AM. Secukinumab. [Updated 2023 Jun 20]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK537091/
2) Blair HA. Drugs. 79(4):433-443. 2019.
3) Patent US7807155B2. https://patents.google.com/patent/US7807155B2/en
4) Elain G, Jeanneau K, Rutkowska A, et al. Glia. 62(5):725-735. 2014.
5) Beerli RR, Bauer M, Fritzer A, et al. MAbs. 6(6):1608-1620. 2014.