Leinco Technologies, Inc.
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Anti-Human IL-23A (p19) (Risankizumab) (CHO Expressed)

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.:	I-2160
Clone:	ABBV-066
Isotype:	Human IgG1κ

Product Description

Specificity:
This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Risankizumab. ABBV-066 (Risankizumab) targets the p19 subunit of human, cynomolgus, and rodent IL-23.

Antigen Distribution:
IL-23 is secreted by activated dendritic cells, macrophages, and monocytes.

Background:
IL-23 is a member of the IL-12 family of proinflammatory and immunoregulatory cytokines[1] and plays a key role in the differentiation and proliferation of type 17 helper T cells (Th17)[2]. IL- 23 exists as a heterodimer composed of the IL-12p40 subunit and a novel p19 subunit that is shared with IL-39[3]. IL-23 activities lead to the production of Th17-derived pro-inflammatory cytokines IL-17 and IL-22[1]. Additionally, IL-23 possesses potent anti-tumor and anti-metastatic activity in mouse models of cancer, suggesting a potential role for IL-23 in therapeutic treatment of cancer[4]. IL-23 also contributes to chronic inflammation of immune-mediated diseases including psoriasis and psoriatic arthritis[2].

Risankizumab is a humanized IgG monoclonal antibody that inhibits the proinflammatory effects of IL-23 by binding to and neutralizing its p19 subunit[5]. Risankizumab was generated by immunizing NMRI × C57/Bl6 mice with a hybrid mouse p40/human p19 recombinant cytokine[6]. The hybrid cytokine was produced in HEK293F mammalian cells as individual p40 and p19 subunits with no linker, similar to native cytokines. Antibodies with high affinity binding to recombinant human IL-23 and the ability to inhibit human IL-23-induced IL-17 production in mouse splenocytes were selected. Epitope mapping identified residues 89-107 and 118-132 as the IL-23 binding sites.

Risankizumab binding prevents IL-23 receptor activation and disrupts the IL-23/Th17 axis[5]. Additionally, risankizumab inhibits IL-23 phosphorylation of STAT3 in human B- lymphoblastoid cell lines derived from human diffuse large cell lymphoma and inhibits induction of IL-17 production from human IL-23 stimulation in mouse splenocytes.

Risankizumab is also known as ABBV-066 and BI 655066. Risankizumab has been approved for treatment of plaque psoriasis, psoriatic arthritis, Crohn's Disease, and ulcerative colitis.

Known Reactivity Species:
Human

Expression Host:
CHO Cells

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

Format:
Purified No Carrier Protein

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.

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 2-8°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:

Antagonist,
B,
ELISA,
FA

Country of Origin
USA

References
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