Leinco Technologies, Inc.
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Anti-Human BCMA (Belantamab) — Fc Muted™

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.:	LT635
Clone:	GSK2857914
Isotype:	Human IgG1κ

Product Description

Specificity:
This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Belantamab. This product is for research use only. Belantamab activity is directed against Human BCMA.

Antigen Distribution:
BCMA protein is expressed on the surface of normal B lymphocytes and nearly all multiple myeloma cell lines. BCMA is almost exclusively expressed on plasmablasts and plasma cells and is also weakly expressed on some memory B cells committed to plasma cell differentiation and on plasmacytoid dendritic cells. BCMA is nearly absent on naïve and memory B cells.

Background:
B cell maturation antigen (BCMA, CD269, TNFRSF-17) is a type III transmembrane glycoprotein that is a member of the tumor necrosis factor (TNF) receptor superfamily[1]. BCMA functions as a cell-surface receptor and is involved in the regulation of B cell proliferation, maturation, and differentiation into plasma cells, and is also required for the survival of long-lived plasma cells[1, 2]. BCMA is more abundantly expressed on malignant plasma cells than normal plasma cells and is a novel treatment target for multiple myeloma (MM)[1, 3, 4], a plasma cell malignancy characterized by clonal proliferation of plasma cells within the bone marrow[2].

BCMA expression is upregulated during MM pathogenesis and evolution, with higher levels associated with poorer prognosis[1]. The soluble form of BCMA, which is derived from direct shredding of membrane BMCA through γ-secretase activity, is also significantly elevated in MM patients relative to healthy individuals and is associated with worse clinical responses.

Belantamab (J6M0) is a novel, humanized antagonistic anti-BCMA IgG1 monoclonal antibody[4] produced in a Chinese Hamster Ovary cell line using recombinant DNA technology[5]. Belantamab has been used in clinical trials as part of the antibody conjugate belantamab mafodotin-blmf (GSK2857916)[5, 6, 7] and has been shown to directly and indirectly target MM cells via multiple mechanisms of action[4]. Binding is BCMA-specific, with belantamab competing with BCMA's two ligands BAFF and APRIL and also inhibiting ligand-induced NFκB signaling[4]. The afucosylation significantly increases the binding affinity of the Fc domain to the FcγR (FcγRIIIa) expressed on effector cells and enhances antibody-dependent cell-mediated cytotoxicity (ADCC)[4].

Known Reactivity Species:
Human

Expression Host:
HEK-293 Cells

Format:
Purified No Carrier Protein

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

Immunogen:
Human TNFRSF17/CD269 (BCMA)

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:

FC,
FA,
ELISA,
WB,
IP

Country of Origin
USA

References
1. Yu B, Jiang T, Liu D. J Hematol Oncol. 13(1):125. 2020.
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4. Tai YT, Mayes PA, Acharya C, et al. Blood. 123(20):3128-3138. 2014.
5. https://www.accessdata.fda.gov/drugsatfda_docs/label/2020/761158s000lbl.pdf
6. Shah N, Chari A, Scott E, et al. Leukemia. 34(4):985-1005. 2020.
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