Leinco Technologies, Inc.
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Anti-Human CEACAM5 (CD66e) (Labetuzumab)

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.: C2540

Clone: hMN-14

Isotype: Human Human IgG1κ

Product Description

Specificity:
This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Labetuzumab. hMN-14 (Labetuzumab) activity is directed against human CEACAM5.

Antigen Distribution:
In normal tissues, CEACAM5 is expressed on gastric and intestinal mucous cells, particularly esophageal squamous epithelia, as well as in the pancreas. In cancers, CEACAM5 is expressed on the majority of solid tumors and is upregulated in a variety of human epithelial malignancies (gastric, colorectal, pancreatic cancers) as well as in non-small cell lung cancer and melanoma. Tumors release CEACAM5 in a soluble form that can be used as a biomarker for cancer.

Background:
CEACAM5 is a member of the carcinoembryonic antigen-related cellular adhesion molecules (CEACAM) family[1]. In normal tissues, CEACAM5 functions as an adhesion molecule and has roles in differentiation, immune modulation, and anoikis inhibition. Additionally, CEACAM5 likely inhibits terminal differentiation and is also involved in activation of $CD8^+$ suppressor T cells. Dysregulation of CEACAM5 has been implicated in tumor initiation, progression, invasion, and metastasis[1,2] as well as in immune-related disease, particularly ulcerative colitis[1]. CEACAM5 is a clinical biomarker for colon cancer[1] and is also a promising target of anti-cancer immunotherapy[2]. CEACAM5 is a mediator of CEACAM1-induced apoptosis, and preventing this interaction may prove beneficial to cancer treatment by blocking immune evasion by cancer cells.

hMN-14 (Labetuzumab; IMMU-130) is a CEACAM5 antibody-drug conjugate composed of a humanized CEACAM5 monoclonal antibody conjugated via the hydrolysable linker CL2A to 7- ethyl-10-hydroxycamptothecin (SN-38), a potent topoisomerase I inhibitor[3,4]. The antitumor activity of labetuzumab has been tested for colorectal[4,7] and prostate cancers[2].

This non-therapeutic biosimilar is not a drug conjugate and thus does not contain the drug SN- 38.

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

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Product Datasheet

www.leinco.com

Known Reactivity Species:
Human

Expression Host:
HEK-293 Cells

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:

B,
ELISA,
FA,
FC,
IHC,
LCI

Country of Origin
USA

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References

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