Anti-Human CD276 (B7-H3) (Mirzotamab)

IVMB0522

Product Information

Product SKU:	IVMB0522	**Clone**:	ABBV-155	**Target**:	CD276
Size:	500 µg			**Isotype**:	Human IgG1κ

Additional Information

Reactivity:	Human	**Host Species**:	Human
Antibody Type:	Biosimilar Recombinant Human Monoclonal Antibody	**Expression Host**:	HEK-293 Cells

Immunogen Information

Background:

CD276, also known as B7 homolog 3 protein (B7-H3), is a member of the B7 superfamily and acts as an immune checkpoint molecule and a costimulatory/coinhibitory immunoregulatory protein[1]. CD276 influences innate and adaptive immunity, regulates the aggressiveness of cancer cells, and is thought to play an important role in tumor development and cancer immunity. CD276 has been studied in many cancers, including breast, lung, ovarian, brain, gastric, and squamous cell carcinoma.

Human CD276 exists as either a soluble isoform or as a ~45–66 kDa type I transmembrane protein that is composed of an extracellular domain, a transmembrane domain, and a short intracellular domain[1]. Soluble CD276 is produced by cleavage from the cell surface or via alternative intron splicing and has been found in the secretomes of exosomes and other extracellular vesicles.

In normal human tissues, CD276 mRNA is widely and abundantly expressed but protein abundance is low[1]. miR-124 is thought to cause translational repression of CD276 by targeting its 3'-UTR, while other miRNAs are known to affect CD276 expression. In tumor cells, CD276 mRNA and protein are abundant, and its presence is correlated with worsened prognosis, poor survival, recurrence rate, and enhanced invasive and migratory properties[1], [2]. CD276 is known to act as a T cell inhibitor that promotes tumor proliferation and invasion and is an immune checkpoint molecule in the epithelial mesenchymal transition pathway[2].

Contact Details | Dublin, Ireland
Email: techsupport@assaygenie.com | **Web:** www.assaygenie.com

Blocking CD276 with monoclonal antibodies reduces tumor growth and prolongs survival in mouse models of various cancers [1], [2]. Additionally, a first-in-human study shows that monotherapy with mirzotamab clezutoclax, a first-in class antibody drug conjugate composed of mirzotamab conjugated via a solubilizing linker to a B cell lymphoma – extra long (BCL-XL) inhibitor, has potential anti-tumor activity[3], [4].

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

Applications: ELISA

Synonyms: ABBV-155, anti-CD276, B7-H3, B7H3

Antigen Distribution: CD276 is weakly expressed on activated lymphocytes, macrophages, dendritic cells, nasal and airway epithelial cells, and osteoblasts. A soluble form is secreted by monocytes, dendritic cells, and activated T cells. CD276 can be abundant in tumor cells.

Immunogen: Human CD276/B7-H3

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.

Specificity: This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Mirzotamab. This product is for research use only. Mirzotamab activity is directed against Human CD276 (B7-H3).

Product Preparation: Recombinant biosimilar antibodies are manufactured in an animal free facility using onlyin vitroprotein 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.

Storage & Handling: Functional grade biosimilar 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 -80°C. Avoid Repeated Freeze Thaw Cycles.