For Research Use Only

anti-PD-1 recombinant VHH, for 2xCys conjugation

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Catalog Number: pd1Cys2

Basic Information

Catalog Number:
pd1Cys2

Applications:
Conjugation

Host:
Alpaca

Conjugate:
Unconjugated

Type :
Nanobody

Class:
Recombinant

RRID:
AB_3101928

Molecular Weight:
13.874 kDa

Description

Alpaca anti-PD-1 VHH, purified recombinant binding protein. Suitable for for cysteine conjugation with thiol-reactive reagents, e.g. maleimides. Note: unconjugated VHHs are not suited for usage without prior labeling, since they contain reactive Cysteines. Shipment and storage buffers contain TCEP to keep Cysteins reduced.

Affinity

Picomolar range, below the assay limit (biolayer interferometry)

Background

Programmed cell death 1 (PD-1, also known as CD279) is an immunoinhibitory receptor that belongs to the CD28/CTLA-4 subfamily of the Ig superfamily. It is a 288 amino acid (aa) type I transmembrane protein composed of one Ig superfamily domain, a stalk, a transmembrane domain, and an intracellular domain containing an immunoreceptor tyrosine-based inhibitory motif (ITIM) as well as an immunoreceptor tyrosine-based switch motif (ITSM) (PMID: 18173375). PD-1 is expressed during thymic development and is induced in a variety of hematopoietic cells in the periphery by antigen receptor signaling and cytokines (PMID: 20636820). Engagement of PD-1 by its ligands PD-L1 or PD-L2 transduces a signal that inhibits T-cell proliferation, cytokine production, and cytolytic function (PMID: 19426218). It is critical for the regulation of T cell function during immunity and tolerance. Blockade of PD-1 can overcome immune resistance and also has been shown to have antitumor activity (PMID: 22658127; 23169436). It has been reported that PD-1 is heavily glycosylated and migrates with an apparent molecular mass of 47-55 kDa on SDS-PAGE, which is larger than its predicted mass of 32 kDa (PMID: 8671665; 17640856; 17003438).

Storage

Storage:
Store at -20°C

Storage Buffer:
10 mM HEPES, 500 mM NaCl, pH 7.0, 1 mM TCEP, 0.09% sodium azide

For technical support and original validation data for this product please contact:

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Selected Validation Data