

## Anti-VSIG4 [Nb119] Standard Size Ab00929-23.9

This chimeric rabbit antibody was made using the variable domain sequences of the original VHH format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Rabbit IgG-Fc fusion, His-Tagged

**Clone Number:** Nb119

**Alternative Name(s) of Target:** Z39Ig; V-set and immunoglobulin domain-containing protein 4; Complement receptor of the Ig superfamily; CRIg; Protein Z39Ig; Z39Ig; Vsig4

**UniProt Accession Number of Target Protein:** Q9Y279

**Published Application(s):** crystallisation, SPR, WB, FC

**Published Species Reactivity:** Human, Mouse

**Immunogen:** The extracellular domain of recombinantly-produced mouse VSIG4 was used to immunise an alpaca (*Vicugna pacos*). Peripheral blood lymphocytes isolated from the immunised alpaca were used to generate a Nanobody phage library, clones from which were selected for binding to the same recombinant mouse VSIG4 extracellular domain.

**Specificity:** Nb119 is able to cross react with both murine and human VSIG4, showing a 250-fold higher affinity with the mouse protein (Wen et al, 2017). Shown crystallographically, Nb119 binds to the variable immunoglobulin domain of both murine and human VSIG4 at the same epitope, contacting beta-strands at the IgV C-terminus. VSIG4 is a dual-functional regulator of T cell immune response and complement receptor. It is a molecular marker of liver disease and arthritis in mice. Recently, it has been found overexpressed on tumour-associated macrophages, and may play a role in non-small cell lung cancer tumourigenesis.

**Application Notes:** Nb119 was shown to exhibit an affinity for murine VSIG4 of 0.9 nM by SPR (Zheng et al, 2014) or 3.5 nM by ITC (Wen et al, 2017). It was further shown by flow cytometry that Nb119 recognised mouse VSIG4 expressed on liver macrophages. Nb119 was crystallised in complex with both murine and human VSIG4 (Wen et al, 2017).

**Antibody First Published in:** Zheng et al. Molecular Imaging with Macrophage CRIg-Targeting Nanobodies for Early and Preclinical Diagnosis in a Mouse Model of Rheumatoid Arthritis J Nucl Med. 2014 May;55(5):824-9. [PMID:24686780](#)

**Note on publication:** Describes the generation of the Nb119 Nanobody from a phage library against murine VSIG4. The Nanobody was subsequently radiolabelled and used for live imaging in arthritic mice.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Purified by Immobilized Metal Affinity Chromatography

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.