

## Anti-IL-21R [ATR-107] Standard Size Ab01293-2.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric mouse antibody was made using the variable domain sequences of the original Human IgG1 format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Mouse IgG2a, Fc Silent™, Lambda

**Clone Number:** ATR-107

**Alternative Name(s) of Target:** CD360; Ab01; Ab-01; ATR107; IL21R; Interleukin-21 receptor; IL-21 receptor; NILR; Novel interleukin receptor; Q9JHX3

**UniProt Accession Number of Target Protein:** Q9HBE5

**Published Application(s):** neutralising, therapeutic

**Published Species Reactivity:** Human, Cynomolgus Monkey, Mouse

**Immunogen:** This antibody was isolated through phage display. The scFv parental clone (18A5), which binds human IL-21R, was isolated from the CS human scFv library, using BaF3 cells expressing human IL-21R and biotinylated IL-21R-Fc fusion protein. Four phage display libraries were constructed based on 18A5, and variants with increased affinity for both human and murine IL-21R were identified, including ATR-107.

**Specificity:** This antibody recognises both human and murine IL-21R extracellular domains, as both were used as targets during alternating rounds of phage display library panning. This antibody also binds to rat and cynomolgus monkey IL-21R, but does not cross-react with human IL-4Rα or IL-2Rβ.

**Application Notes:** This antibody binds to both human and murine IL-21R; surface plasmon resonance analysis has revealed this antibody to have an affinity to human and cynomolgus monkey IL-21R of 2 nM, and to murine IL-21R of 16 nM (Vugmeyster et al, 2010). This antibody has been shown to neutralise the IL-21-dependent proliferation of both activated human primary B and CD4+ T cells and mouse CD8+ T cells (Vugmeyster et al, 2010). Additionally, this antibody inhibits IL-21-induced phosphorylation of STAT3 in CD4+ T cells in a concentration-dependent manner (Zhu et al, 2013). In the MRL-Faslpr mouse model of lupus, administration of this antibody has been shown to reduce anti-dsDNA antibodies and IgG deposits in the kidney (Vugmeyster et al, 2010). This antibody did not induce cytokine storm-associated gene activation in human PBMCs in vitro, nor when administered to cynomolgus monkeys (Guo et al, 2010). When administered to humans as part of a phase I trial, this antibody was highly immunogenic, with a prolonged pharmacodynamic effect, but was observed to lead to the development of anti-drug antibodies in

75% of subjects (Hua et al, 2013).

**Antibody First Published in:** Vugmeyster et al. In vitro potency, pharmacokinetic profiles and pharmacological activity of optimized anti-IL-21R antibodies in a mouse model of lupus MAbs. 2010 May-Jun; 2(3): 335-346. [PMID:20424514](#)

**Note on publication:** Describes the original generation and characterisation of this antibody.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**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.