Anti-CD47 [A4] Bulk Size Ab01061-23.159-BT

Isotype and Format: Rabbit IgG-Fc fusion
Clone Number: A4
Alternative Name(s) of Target: IAP; CD47 antigen; CD47 glycoprotein; Integrin-associated protein; Leukocyte surface antigen CD47; MER6; OA3; Rh-related antigen
UniProt Accession Number of Target Protein: Q61735
Published Application(s): antagonist, Blocking, functional assays, in vitro, in vivo, FC
Published Species Reactivity: Mouse
Immunogen: This mouse CD47-specific antagonist nanobody was raised by immunising alpacas with the extracellular Ig-like V-type domain (ECD) of mouse CD47. Subsequently, peripheral blood lymphocytes (PBLs) were isolated from immunized alpacas, and the extracted RNA was used to construct a VHH phage display library. The antibody was generated by panning against the mouse CD47 ECD.
Specificity: This nanobody is specific for murine CD47, a glycosylated five transmembrane protein with a small cytoplasmic domain. CD47 is involved in adhesion through interactions with SIRP (signal regulator protein) and is non-covalently associated with β3 integrins
Application Notes: This nanobody has been shown to bind with high affinity and specificity to mouse CD47, as characterized by SPR and FACS (Sockolosky et al 2016). In vitro functional assays suggest that this nanobody potently blocks SIRPα binding to tumor cell-surface CD47, while broadly recognizing mouse hematopoietic and red blood cells without causing erythropenia (Sockolosky et al 2016). The original nanobody was reported to bind immobilized mouse CD47 with a binding affinity of Kd= ~12 pM (Sockolosky et al 2016). Consistent with its species-specific binding properties, this nanobody has been found not to influence human macrophage phagocytosis of human tumor cells. Furthermore, this nanobody has been used to investigate the biological consequences of antagonizing CD47 in syngeneic mouse disease models (Sockolosky et al 2016).
Antibody First Published in: Sockolosky et al. Durable antitumor responses to CD47 blockade require adaptive immune stimulation. Proc Natl Acad Sci U S A. 2016 May 10;113(19):E2646-54. PMID:27091975
Note on publication: Describes the original generation of this mouse CD47-specific antagonist nanobody, its characterisation by SPR and FACS, and its applications in functional in vitro and in vivo assays to reveal that durable antitumor responses to CD47 blockade require adaptive immune stimulation.

Product Form

Size:

1 mg Purified antibody in bulk size.
Purification: Protein A affinity purified
Supplied In: PBS only.
Storage Recommendation: Store at 4ºC for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20ºC.
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.