

Anti-IFN α [AIFN] Bulk Size Ab00792-10.0-BT

Isotype and Format: Human IgG1, Lambda

Clone Number: AIFN

Alternative Name(s) of Target: interferon alpha; AIFN α 1bScFv01; AIFN α 1bIgG01; interferon α ; interferon- α ; IFN α 1b; IFN- α 1b; IFN- α ; interferon α 1b; interferon- α 1b; IFN-alpha; INF alpha; interferon-alpha

UniProt Accession Number of Target Protein: P01562

Published Application(s): neutralize

Published Species Reactivity: Human

Immunogen: The scFv AIFN α 1bScFv01 was generated by screening a non-immune synthetic human antibody phage display library. The scFv sequence isolated was then be fused to a human IgG1 constant region to create a whole antibody.

Specificity: AIFN α 1bScFv01 and the AIFN α 1bIgG01 whole antibody bind to IFN α 1b (KD \sim 0.75 nM determined by SPR); the epitope consists of the P26-N40 region in loop AB and E147-R150 region in helix E of IFN α 1b - residues L30, D32, D35 and R150 are critical for binding. The antibody also binds to IFNR2, which shares partial epitopes with IFN α 1b - binding affinity to IFNR2 is much weaker. The antibody does not bind to recombinant IFN α 2b or IFN γ . IFN α is a cytokine and modulates the activity of T cells, B cells and dendritic cells to regulate immunological functions, and are produced during the early stages of the immune response. Overproduction of IFN α can result in the occurrence of autoimmune diseases such as SLE (systemic lupus erythematosus), a multi-organ autoimmune disease that primarily affects the skin, joints, blood cells, heart, kidneys, and the nervous system.

Application Notes: AIFN α 1bIgG01, the IgG1 version of the antibody, is able to cause downregulation of ISG15 and IFIT-1 expression ex vivo in PBMCs, induced by either recombinant IFN α 1b or naive IFN α from SLE patients' sera. The antibody also reduces the total serum IgG and IgM antibody levels in a pristane-primed lupus-like mouse model. This neutralization occurs by out-competing IFNR2 for IFN α 1b, which prevents the formation of the IFNR2-IFN α interaction and the IFN α -mediated signaling pathway.

Antibody First Published in: Ouyang et al. Structural insights into a human anti-IFN antibody exerting therapeutic potential for systemic lupus erythematosus J Mol Med (Berl). 2012 Jul;90(7):837-46

[PMID:22307521](#)

Note on publication: Describes the generation of anti-IFN α antibody by non-immune human phage display. The antibody was characterized both in vivo and in vitro, and the crystal structure of the antibody scFv with IFN α 1b was solved.

Product Form

Size: 1 mg Purified antibody in bulk size.

Purification: Protein A affinity purified

Supplied In: PBS only.

Storage Recommendation: Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. 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.