



**SZABO  
SCANDIC**

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](http://linkedin.com/company/szaboscandic)



## Anti-IFN $\alpha$ [AIFN] Bulk Size Ab00792-10.0-BT

**Isotype and Format:** Human IgG1, Lambda

**Clone Number:** AIFN

**Alternative Name(s) of Target:** AIFN $\alpha$ 1bScFv01; AIFN $\alpha$ 1bIgG01; interferon  $\alpha$ ; interferon- $\alpha$ ; IFN $\alpha$ 1b; IFN- $\alpha$ 1b; IFN- $\alpha$ ; interferon  $\alpha$ 1b; interferon- $\alpha$ 1b; interferon alpha; 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 $\alpha$ 1bScFv01 was generated by screening a non-immune synthetic human antibody phage display library. The scFv sequence isolated was then fused to a human IgG1 constant region to create a whole antibody.

**Specificity:** AIFN $\alpha$ 1bScFv01 and the AIFN $\alpha$ 1bIgG01 whole antibody bind to IFN $\alpha$ 1b (KD ~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 $\alpha$ 1b - residues L30, D32, D35 and R150 are critical for binding. The antibody also binds to IFNR2, which shares partial epitopes with IFN $\alpha$ 1b - binding affinity to IFNR2 is much weaker. The antibody does not bind to recombinant IFN $\alpha$ 2b or IFNy. IFN $\alpha$  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 $\alpha$  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 $\alpha$ 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 $\alpha$ 1b or naïve IFN $\alpha$  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 $\alpha$ 1b, which prevents the formation of the IFNAR2-IFN $\alpha$  interaction and the IFN $\alpha$ -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 $\alpha$  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 $\alpha$ 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.