

Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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Zuschläge

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Anti-IL-2 [NARA1] Standard Size, 200 µg, Ab03232-2.0 View online

Anti-IL-2 [NARA1] Standard Size Ab03232-2.0

Isotype and Format: Mouse IgG2a, Kappa

Clone Number: NARA1

Alternative Name(s) of Target: IL2; IL-2; TCGF; Interleukin-2; T-cell growth factor; Aldesleukin UniProt Accession Number of Target Protein: P60568

Published Application(s): crystallography, in vitro, in vivo, SPR, FC

Published Species Reactivity: Human

Immunogen: The original antibody was generated immunizing Balb/c mice with human IL-2.

Specificity: The antibody is specific for human IL-2. The antibody binds to a three-dimensional epitope of hIL-2 (residues P34, K35, R38, T41, Q74, and K76). The antibody overlaps with the CD25-binding epitope of IL-2. The antibody does not cross reacts with mouse IL-2.

Application Notes: SPR showed the binding of the antibody to IL-2 prevented further binding of hCD25 to IL-2; the affinity of the antibody to hIL-2 was ~10–9 M. The crystal structure of the Fab fragment in complex with IL-2 was determined. IL-2/antibody complexes preferentially expand CD8+ T and NK cells in vivo while disfavoring CD25+ Tregs in transplantable metastatic melanoma model. This difference was also confirmed by kinetic proliferation studies. The complex IL-2/antibody decreased the tumor growth in mice by increasing the CD8+ T cell responses. The IL-2/antibody complex immunotherapy was also efficacious in a spontaneous melanoma model in mice. The complex II-2/antibody shows potential as a therapeutic agent as it achieved strong antitumor immune responses (Arenas-Ramirez et al., 2016; PMID: 27903862). In order to prevent in vivo dissociation of the complex IL-2/antibody, NARA1leukin was constructed by integrating IL-2 into the antigen-binding groove on the antibody. The NARA1leukin version showed a longer half-life in vivo and more expansion of CD8+ T and NK cells, with no association with CD25, leading to a stronger antitumor response in B16-F10 murine models (Sahin et al., 2020; PMID: 33353953). The use of hIL-2/NARA1 in combination with Ezh2, an inhibitor of the histone methyltransferase enhancer of zeste homolog 2, showed enhanced tumor control in several mouse models of melanoma (Zingg et al., 2017: PMID: 28746871).

Antibody First Published in: Ramirez et al. Improved cancer immunotherapy by a CD25-mimobody conferring selectivity to human interleukin-2. Sci Transl Med. 2016 Nov 30;8(367):367ra166. PMID:27903862

Note on publication: The paper describes the generation and characterization of the antibody, which is specific for IL-2 and it overlaps with the CD25-binding epitope of IL-2.

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.