



# 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

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# Anti-Nerve growth factor [mab 911] Standard Size Ab03301-1.1

**Isotype and Format:** Mouse IgG1, Kappa

**Clone Number:** mab 911

**Alternative Name(s) of Target:** Beta-nerve growth factor; Beta-NGF

**UniProt Accession Number of Target Protein:** P01138

**Published Application(s):** Blocking, crystallization, in vitro, in vivo, inhibition, therapeutic, ELISA

**Published Species Reactivity:** Human, Mouse

**Immunogen:**

**Specificity:** The antibody is specific for NGF. The NGF epitope is composed of  $\beta$ -strand segments from both NGF monomers. NGF is involved primarily in the growth, as well as the maintenance, proliferation, and survival of nerve cells (neurons).

**Application Notes:** The specificity of the original format of the antibody to NGF was confirmed by ELISA analysis ( $EC_{50} = 0.37$  nM). The antibody was evaluated for its ability to block the binding of hNGF to the TrkA and p75 NGF receptors in various in vitro assays, such as blocking of TrkA autophosphorylation and blocking of NGF-dependent survival of dorsal root ganglion sensory neurons. The antibody was a potent blocker of all activities (Hongo et al., 2000; PMID: 10952410). In vivo administration of the antibody significantly reduces bone cancer pain behaviors (Sevcik et al., 2005; PMID: 15836976 and Halvorson et al., 2005; PMID: 16230406 and Buehlmann et al., 2019; PMID: 30161041) and fracture pain-related behaviors (Koewler et al., 2007; PMID: 17638576). The structure of Nerve Growth factor in complex with the Fab fragment was determined. Library Scanning Mutagenesis method was used to convert the original antibody in the humanized antibody tanezumab. The antibody bound human and murine NGF with high affinity (KD  $\sim 10$  nM). Tanezumab and the original antibody blocked both TrkA and p75NTR binding to NGF and inhibited NGF-dependent neuron survival. Tanezumab inhibited NGF-dependent survival with an  $IC_{50}$  of 15 pM; under the same conditions, 911 inhibited NGF with an  $IC_{50}$  of 400 pM (La Porte et al., 2014; PMID: 24830649). Preventative and therapeutic treatment with the antibody significantly prevented, or reversed, MIA-induced pain behaviour in osteoarthritis (Xu et al., 2016; PMID: 27208420).

**Antibody First Published in:** Hongo et al. Antibody binding regions on human nerve growth factor identified by homolog- and alanine-scanning mutagenesis. Hybridoma. 2000 Jun;19(3):215-27.

[PMID:10952410](#)

**Note on publication:** The original paper describes the generation and characterization of a panel of monoclonal antibodies.

## 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.