

## Product datasheet for **TA399862**

### NGF Rabbit Monoclonal Antibody [Clone ID: mab 911]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	mab 911
Applications:	BI, ELISA, Inhib
Reactivity:	Human, Mouse
Modifications:	This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG1 format for improved compatibility with existing reagents assays and techniques.
Host:	Rabbit
Isotype:	IgG, kappa
Clonality:	Monoclonal
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).

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).

**Formulation:** PBS with 0.02% Proclin 300.



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Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.
Database Link:	<a href="#">P01138</a>
Synonyms:	Beta-nerve growth factor; Beta-NGF