

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Neuroplastin in direct ELISAs and Western blots. In direct ELISAs, approximately 100% cross-reactivity with recombinant human Neuroplastin-65 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Neuroplastin Gln29-Pro338, predicted Accession # P97300
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

Neuroplastin (NPTN or neural plasticity-dependent synaptic rearrangement protein; also Np65 and SDR-1) is a 63-67 kDa member of the CD147 family, Ig-superfamily of molecules. Its expression is primarily restricted to the PSD of select neurons, and it likely serves as a cell adhesion molecule between cells. NPTN is known to bind homotypically in trans, and this complex appears to interact with FGFR1 in cis. Engagement of the FGFR induces neurite outgrowth. Notably, rodent and human Np65 show distinctly different staining patterns in the hippocampus and cerebellum of the brain. Mature mouse NPTN is a 369 amino acid (aa) type I transmembrane glycoprotein. It possesses a 310 aa extracellular region (aa 29-338) that contains three Ig-like domains (aa 29-134; 148-234; 237-327), and a 38 aa cytoplasmic tail. There are three splice forms that have been described. One is a widely-expressed 53-57 kDa isoform (Np55) that contains a Glu substitution for aa 31-147, a second is a splice form that shows the above substitution coupled to a deletion of aa 371-374, and a third is an isoform that contains a nine aa substitution for aa 1-235. Over aa 1-338, mouse NPTN shares 95% and 98% aa sequence identity with human and rat NPTN/Np65, respectively.

## PRODUCT SPECIFIC NOTICES

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