



Connecting Immunology to Metabolism™

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**BULK
AVAILABLE**

Netrin-1 (human):Fc (human) (rec.)

AG-40B-0075-C010

10 µg

AG-40B-0075-BULK

Please inquire for BULK Prices!

- Full biological activity (tested by key inventors)
- Does not aggregate – Does not precipitate
- Large batch sizes are available for reproducible results

SOURCE/HOST	HEK 293 cells
MW	~90kDa (determined by SDS-PAGE).
SEQUENCE	The Fc portion of human IgG1 is fused to the C-terminus of human netrin-1 (aa 25-604).
SPECIES CROSS-REACTIVITY	Binds to human, mouse and rat UNC5B.
PURITY	≥95% (determined by SDS-PAGE).
FORMULATION	Lyophilized. Contains 10mM phosphate buffer, pH7.0, 300mM sodium chloride and 300mM arginine.
CONCENTRATION	0.1mg/ml after reconstitution.
RECONSTITUTION	Reconstitute with 100µl sterile water. PBS containing at least 0.1% BSA should be used for further dilutions.
ENDOTOXIN CONTENT	<0.1EU/µg purified protein (LAL test; Lonza).

Functions and Therapeutic Implications

- **Inducer of axonal outgrowth, axon orientation and neuronal migration. Modulator of leukocyte migration. Regulator of angiogenesis. Blocks cell death by its unbound receptors.**

REVIEW LIT: Netrins: beyond the brain: V. Cirulli et M. Yebra; Nat. Rev. Mol. Cell Biol. **8**, 296 (2007) ■ The netrin protein: S. Rajasekharan & T.E. Kennedy; Gen. Biol. **10**, 239 (2009) ■ Netrin-1 role in angiogenesis- To be or not to be a pro-angiogenic factor? M. Castets & P. Mehlen; Cell Cycle **9**, 1466 (2010)

- **Binds amyloid precursor protein (APP). Reverses Alzheimer's Disease (AD) symptoms (in mouse).**

LIT: Netrin-1 interacts with amyloid precursor protein and regulates amyloid-β production: F.C. Lourenço, et al.; CDD **16**, 655 (2009)

- **Promising target for Multiple Sclerosis (and other progressive demyelinating disease).**

LIT: Maintenance of axo-oligodendroglial paranodal junctions requires DCC and netrin-1: Jarjour AA, et al.; J. Neurosci. **28**, 11003 (2008)

- **Survival factor (biomarker) for aggressive neuroblastoma (NB).**

LIT: Netrin-1 acts as a survival factor for aggressive neuroblastoma: C. Delloye-Bourgeois, et al.; J. Exp. Med. **206**, 833 (2009)



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CONTINUED ON BACKCOVER

- **Biomarker for human acute kidney injury (AKI).**

LIT: Netrin-1: a novel universal biomarker of human kidney injury: G. Ramesh, et al.; Transplant Proc. **42**, 1519 (2010)

- **Innovative target for drug therapy in inflammation-driven colorectal cancers.**

LIT: Netrin-1, a missing link between chronic inflammation and tumor progression: A. Paradisi & P. Mehlen; Cell Cycle. (2010) (Epub ahead of print)

- **Shows anti-inflammatory properties in hypoxia-induced inflammation, rheumatoid arthritis (RA), osteoarthritis (OA) and vascular disease.**

LIT: Role of the netrin system of repellent factors on synovial fibroblasts in rheumatoid arthritis and osteoarthritis: T. Schubert, et al.; Int. J. Immunopathol. Pharmacol. **22**, 715 (2009) ▪ Hypoxia-inducible factor-dependent induction of netrin-1 dampens inflammation caused by hypoxia: P. Rosenberger, et al.; Nat. Immunol. **10**, 195 (2009)

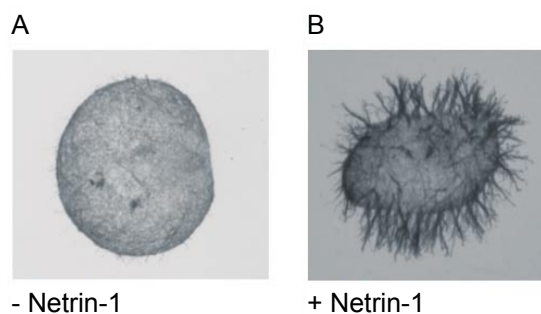
Biological Activity Data

Induction of Axonal Outgrowth

FIGURE: Netrin-1 (human):Fc (human) (rec.) (Prod. No. AG-40B-0075) induces outgrowth of the commissural axon.

METHOD: Dorsal spinal cords were dissected out from E13 rat embryos and cultured in collagen matrix in the presence or absence of netrin-1 (250ng/ml). Axons were then stained with an anti- β -tubulin antibody.

Picture courtesy of Dr. Véronique Corset, Prof. Patrick Mehlen lab, Centre Léon Bérard, Lyon



ERK1/2 Activation

FIGURE: Netrin-1 (human):Fc (human) (rec.) (Prod. No. AG-40B-0075) triggers a DCC-dependent phosphorylation of ERK1/2.

METHOD: HEK 293 cells (Control) or HEK 293 expressing the netrin-1 receptor DCC were incubated with netrin-1 (human):Fc (human) (rec.) (5 nM) for the indicated time points (shown in minutes). Antibodies against DCC, total ERK1/2 or phospho-ERK1/2 were used and visualized with a chemiluminescence detection system.

Picture courtesy of Nicolas Rama, Prof. Patrick Mehlen lab, Centre Léon Bérard, Lyon

