

TECHNICAL DATA SHEET

# Recombinant Mouse Persephin (Carrier-free)

Catalog Number: 21-7081

## RPx-Pro™ Recombinant Protein

### PRODUCT INFORMATION

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Recombinant Mouse Persephin (Carrier-free)

#### DESCRIPTION

Persephin (PSP) is a secreted protein that belongs to the family of neurotrophic factors that includes GDNF, neurturin (NTN) and artemin, all distantly related to the TGF-beta superfamily. Neurotrophic factors play a role in development and maintenance of the nervous system. Persephin is reported to promote both the survival and growth of central dopaminergic and motor neurons, and kidney development, but does not support the peripheral nervous system. Persephin does not seem to signal through the same receptor complexes as other family members GDNF and NTN, but uses GFR alpha-4.

#### MOLECULAR MASS

Recombinant murine Persephin is a disulfide-linked homodimer, composed of two 10.3 kDa polypeptide chains (96 total amino acid residues). Each chain contains seven conserved cysteine residues, one of which (Cys 63) is used for inter-chain disulfide bridging and the others are involved in intramolecular ring formation known as the cysteine knot configuration.

#### AMINO ACID SEQUENCE

ALAGSCLWS LTLPV AELGL GYASEEKVIF RYCAGSCPQE ARTQHSLVLA RLRGRGRAHG RPCCQPTSYA DVTFLLDDQHH  
WQLPQLSAA ACGCGG

#### SOURCE

E. coli

#### APPLICATIONS

Bioassay

#### PURITY

98 %

#### STORAGE

-20°C

#### PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

#### ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/μg of protein (<1 EU/μg).

#### AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

#### CROSS REACTIVITY

Human

#### BIOACTIVITY

The ED<sub>50</sub> was determined by its ability to stimulate proliferation of human thyroid carcinoma cells (TT cells) is < 0.1 ng/ml, corresponding to a specific activity of > 1 x 10<sup>7</sup> units/mg.

#### RESEARCH AREAS

Neurobiology; TGF-beta Superfamily

#### RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

#### REFERENCES

Millbrandt J, de Sauvage FJ, Fahrner TJ, Baloh RH, Leitner ML, Tansey MG, Lampe PA, Heuckeroth RO, Kotzbauer PT, Simburger KS, Golden JP, Davies JA, et al. 1998. *Neuron*. 20(2): 245-253. Lindahl M, Poteryaev D, Yu L, Arumae U, Timmusk T, Bongarzone I, Aiello A, Pierotti MA, Airaksinen MS and Saarma M. 2001. *J Biol Chem*. 276(12): 9344-9341. Enokido Y, de Sauvage F, Hongo JA, Ninkina N, Rosenthal A, Buchman VL and Davies AM. 1998. *Curr Biol*. 8(18): 1019-1022.

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