TECHNICAL DATA SHEET

Recombinant Human Persephin (Carrier-free)

Catalog Number: 21-7122

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

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Recombinant Human Persephin (Carrier-free)

DESCRIPTION

Persephin (PSP) is a secreted protein belonging to the family of neurotrophic factors that includes GDNF, neurturin (NTN) and artemin, all distantly related to the TGF-beta superfamily. Neurotrophic factors play in 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. It is expressed at very low levels in many tissues. Persephin does not seem to signal through the same receptor complex as other family members GDNF and neurturin, but uses subunit GFR alpha-4 along with the receptor tyrosine kinase RET.

MOLECULAR MASS

Recombinant Human Persephin is a 194 amino acid disulfide-linked homodimer, composed of two 10.4 kDa polypeptide chains.
Note: Licensed to manufacture by the University of Washington - patent numbers US 6,716,600; US 6,692,943; US 6,645,937; US 6,403,335; US 6,232,449; US 6,222,022.

AMINO ACID SEQUENCE

RALSGPCQLW SLTLSVAELG LGYASEEKVI FRYCAGSCPR GARTQHGLAL ARLQGQGRAH GGPCCRPTRY TDVAFLDDRH RWQRLPQLSA AACGCGG

SOURCE	APPLICATIONS	PURITY	STORAGE
E. coli	Bioassay	98 %	-20°C

PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

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

Mouse, Rat

BIOACTIVITY

Human Persephin binds to mammalian GFRa4 with a Kd of 100 pM and, within a concentration range of 0.1-1.0 ng/ml, induces RET phosphorylation.

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.