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## Persephin Recombinant Protein

CATALOG NUMBER: 40-501

Specifications         SPECIES:       Human         SOURCE SPECIES:       E. coli         SEQUENCE:       ALSGPCQLWS LTLSVAELGL GYASEEKVIF RYCAGSCPRG ARTOHGLALA RLQGQGRAHG GPCCRPTRYT DVAFLDDRHR WQRLPQLSAA ACGCGG         TESTED APPLICATIONS:       Human Persephin induces RET phosphorylation using a concentration range of 0.1 - 1.0 ng/mL. Human Persephin binds to mammalian GFRa4 with the Kd of 100pM. Other members of the GDNF family (Artemin, GDNF and Neurturin) do not bind to mammalian GFRa4.         Properties       Endotoxin level is less than 0.1 ng per ug (1EU/ug).         PHYSICAL STATE:       Lyophilized         STORAGE CONDITIONS:       The lyophilized Persephin recombinant protein is stable for at least 2 years from date of receipt at -20°C. Reconstituted Persephin is stable for at least 2 years from date of receipt at -20°C. As with any protein, exposing Persephin recombinant protein to repeated freeze / thaw cycles is not recommended. When working with proteins care should be taken to keep recombinant protein at a cool and stable temperature.         Additional Info       Accession No.:         ALTERNATE NAMES:       PSP, Persephin, PSP         ACCESSION NO.:       NP_004149.1         PROTEIN GI NO.:       4758974		
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Background		-
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Persephin is a disulfide-linked homodimer neurotrophic factor structurally related to GDNF, Artemin, and Neurturin. These proteins belong to the cysteine-knot family of growth factors that assume stable dimeric structures. Persephin signals through a multicomponent receptor system, composed of RET and one of four GFR alpha (alpha1-alpha4) receptors. The GFRalpha4 was first identified in chicken and was later shown to be the preferential binding subunit for Persephin. Persephin promotes the survival of ventral midbrain dompaminergic neurons and motor neurons after sciatic nerve oxotomy, and like GNDF, promotes ureteric bud branching. However, in contrast to GDNF and Neurturin, Persephin does not support survival of peripheral neurons. Recombinant human Persephin is a disulfide-linked homodimer, composed of two 10.3 kDa polypeptide chains (192 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. Manufactured under license from the University of Washington patent# US 6,716,600; US 6,692,943; US 6,645,937; US 6,403,335; US 6,232,449; US 6,222,022.

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