

Persephin, human recombinant

CATALOG #:	7185-10	10 µg
	7185-50	50 µg
ALTERNATE NAMES:	PSP, PSPN	
SOURCE:	E. coli	
PURITY:	≥ 98% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	10.4 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 0.3 x PBS, pH 7.2	
STORAGE CONDITIONS:	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

RECONSTITUTION:

Centrifuge the vial prior to opening. Reconstitute in 5 mM Sodium Phosphate, pH 7.5 to a concentration of ≤ 0.5 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

DESCRIPTION:

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 α (α 1- α 4) receptors. The GFR α 4 was first identified in chicken and was later shown to be the preferential binding subunit for Persephin. Persephin promotes the survival of ventral midbrain dopaminergic neurons and motor neurons after sciatic nerve oxotomy, and like GDNF, 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 10.4 kDa polypeptide chains (194 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:

RALSGPCQLW SLTLSVAELG LGYASEEKVI FRYCAGSCPR GARTQHGLAL
ARLQGGGRAH GGPCRPRTRY TDVAFLDDRH RWQRLPQLSA AACGCGG

BIOLOGICAL ACTIVITY:

Human Persephin induces RET phosphorylation using a concentration range of 0.1-1.0 ng/ml. Human Persephin binds to mammalian GFR α 4 with the K_d of 100pM. Other members of the GDNF family (Artemin, GDNF and Neurturin) do not bind to mammalian GFR α 4.

RELATED PRODUCTS:

- Persephin, murine recombinant (Cat # 7186-10, -50)
- Neuritin, human recombinant (Cat # 7179-10, -50)
- Artemin, human recombinant (Cat # 4515-20, -1000)
- GDNF, murine recombinant (Cat. No. 7156-10, -50)
- GDNF, rat recombinant (Cat. No. 7157-10, -50)
- GDNF, human recombinant (Cat. No. 4097-10, -50, 100)
- GDNF Antibody (Cat. No. 5098-100)
- GDNF Antibody (Cat. No. 5198-100)
- GDNF Blocking peptide (Cat. No. 5098BP-50)

FOR RESEARCH USE ONLY! Not to be used in humans.