

Recombinant Mouse Persephin (Mouse Persephin)

Product Information

Product Name	Cat#	Size
	92537ES08	5 µg
Recombinant Mouse Persephin (Mouse Persephin)	92537ES60	100 µg
	92537ES76	500 µg

Product Description

Persephin is a secreted protein belonging to the glial cell line-derived neurotrophic factor (GDNF) family of the TGF-beta superfamily. It shares 38 - 46% amino acid (aa) identity with family members GDNF, neurturin and artemin. Persephin is expressed at very low levels in most tissues. The 156 aa, 10 - 12 kDa mature protein contains a signal sequence, a pro-domain and a 96 aa mature sequence with several cysteines that are conserved among family members. It circulates as an unglycosylated disulfide-linked homodimer. Mature human Persephin shares 81% and 80%, 89% and 87% amino acid sequence identity with mouse, rat, bovine and canine Persephin, respectively. Like other GDNF family members, Persephin acts through engagement of GRF alpha 4, a glycosylphosphatidylinositol (GPI)-linked GDNF receptor family (GRF) member that signals through the receptor tyrosine kinase RET. Persephin is reported to promote both the survival and growth of central dopaminergic and motor neurons, and kidney development. These effects are correlated with the expression patterns of GFR alpha 4, and RET. Functional GFR alpha 4 isoforms are found only in thyroid, adrenal medulla and portions of the central nervous system, and include GPI-linked, transmembrane and soluble forms. In vitro, Persephin promotes survival only in neurons which coexpress GPI-linked GFR alpha 4 with RET. This effect does not show a strong correlation to the recruitment of RET in lipid rafts seen with other GDNF family members.

Product Properties

Synonyms	Persephin, PSP, PSPN
Accession	O70300
Unigene	Mm.86487.
Source	E.coli-derived mouse Persephin protein, Ala61-Gly156.
Molecular Weight	Approximately 20.7 kDa.
AA Sequence	ALAGSCLWS LTLPAELGL GYASEEKVIF RYCAGSCPQE ARTQHSLVLA RLRGRGRAHG RPCCQPTSYA DVTFLDDQHH WQLPQLSAA ACGCGG
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	>95% by SDS-PAGE and HPLC analyses.
Biological Activity	The ED ₅₀ as determined by a cell proliferation assay using human TT medullary thyroid cancer cells is less than 0.1 ng/mL, corresponding to a specific activity of > 1.0 × 10 ⁷ IU/mg. Fully biologically active when compared to standard.
Endotoxin	< 0.1 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30% ACN, 0.1% TFA, 150 mM NaCl. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!