

Recombinant Rat TGF-beta 2/TGFB2 protein (His tag)



Catalog Number: PDER100075

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

Synonyms	BSC-1 cell growth inhibitor;cetermin;Glioblastoma-derived T-cell suppressor factor;G-TSF;polyergin;transforming growth factor beta-2
Species	Rat
Expression Host	E.coli
Sequence	Ala 331-Ser 442
Accession	Q07257
Calculated Molecular Weight	12.2 kDa
Observed molecular weight	13 kDa
Tag	N-His

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Background

TGF-beta 2 (transforming growth factor beta 2) is one of three closely related mammalian members of the large TGF-beta superfamily that share a characteristic cysteine knot structure. TGF-beta 1, -2 and -3 are highly pleiotropic cytokines proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF-beta isoform has some non-redundant functions; for TGF-beta 2, mice with targeted deletion show defects in development of cardiac, lung, craniofacial, limb, eye, ear and urogenital systems. Covalent linkage of LAP to one of three latent TGF-beta binding proteins (LTBPs) creates a large latent complex that may interact with the extracellular matrix. TGF-beta is activated from latency by pathways that include actions of the protease plasmin, matrix metalloproteases, thrombospondin 1 and a subset of integrins. TGF-beta 2 signaling begins with binding to a complex of the accessory receptor betaglycan (also known as TGF-beta RIII) and a type II ser/thr kinase receptor termed TGF-beta RII. This receptor then phosphorylates and activates another ser/thr kinase receptor, TGF-beta RI (also called activin receptor-like kinase (ALK) -5), or alternatively, ALK-1. The whole complex phosphorylates and activates Smad proteins that regulate transcription. Use of other signaling pathways that are Smad-independent allows for disparate actions observed in response to TGF-beta in different contexts.

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