

Gremlin-1, human recombinant

CATALOG #:	7159-10	10 µg
	7159-50	50 µg
ALTERNATE NAMES:	CKTSF1B1, DAND2, DRM, IHG-2	
SOURCE:	CHO cells	
PURITY:	≥ 90% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	18.3 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 7.5 and 150 mM NaCl.	
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 water to a concentration of 0.1-1.0 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:

Gremlin-1 (isoform-1) belongs to a group of diffusible proteins which bind to ligands of the TGF-β family and regulate their activity by inhibiting their access to signaling receptors. The interplay between TGF-β ligands and their natural antagonists has major biological significance during development processes, in which cellular response can vary considerably depending upon the local concentration of the signaling molecule. Gremlin is highly expressed in the small intestine, fetal brain, and colon and lower expression in

brain, prostate, pancreas and skeletal muscle. Gremlin-1 regulates multiple functions in early development by specifically binding to and inhibiting the function of BMP-2, -4, and -7. It also plays a role in carcinogenesis and kidney branching morphogenesis. Recombinant Gremlin-1 is an 18.3 kDa protein containing 160 amino acid residues.

BIOLOGICAL ACTIVITY:

Determined by its ability to inhibit BMP-4 induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The ED₅₀ for this effect is 0.07-0.11 µg/ml

AMINO ACID SEQUENCE:

KKKGSQGAIP PDKAQHNDS EQTQSPQQPG SRNRGRGQGR GTAMPGEEVL
ESSQEALHVT ERKYLKRDWC KTQPLKQTIH EEGCNSRTII NRFCYGQCNS
FYIPRHIRKE EGSFQSCSFC KPKKFTTMMV TLNCPQLQPP TKKKRVTRVK
QCRCISIDLD

RELATED PRODUCTS:

- Gremlin-2, human recombinant (Cat. No. 4657-20, -100, -1000)
- Gremlin-2 Antibody (Cat. No. 5657-100)

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