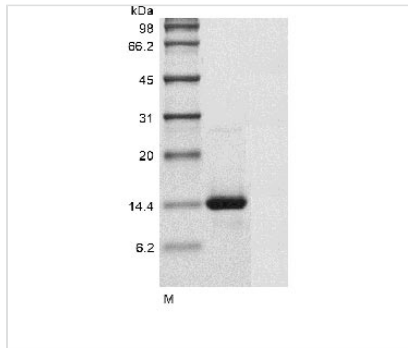




Recombinant Human Growth/differentiation factor 6 (GDF6) (Active)

Product Code	CSB-AP005971HU
Relevance	Growth factor that controls proliferation and cellular differentiation in the retina and bone formation. Plays a key role in regulating apoptosis during retinal development. Establishes dorsal-ventral positional information in the retina and controls the formation of the retinotectal map (PubMed:23307924). Required for normal formation of bones and joints in the limbs, skull, digits and axial skeleton. Plays a key role in establishing boundaries between skeletal elements during development. Regulation of GDF6 expression seems to be a mechanism for evolving species-specific changes in skeletal structures. Seems to positively regulate differentiation of chondrogenic tissue through the growth factor receptors subunits BMPR1A, BMPR1B, BMPR2 and ACVR2A, leading to the activation of SMAD1-SMAD5-SMAD8 complex. The regulation of chondrogenic differentiation is inhibited by NOG (PubMed:26643732). Also involved in the induction of adipogenesis from mesenchymal stem cells. This mechanism acts through the growth factor receptors subunits BMPR1A, BMPR2 and ACVR2A and the activation of SMAD1-SMAD5-SMAD8 complex and MAPK14/p38 (By similarity).
Abbreviation	Recombinant Human GDF6 protein (Active)
Uniprot No.	Q6KF10
Storage Buffer	Lyophilized from a 0.2 um filtered concentrated solution in 30 % Acetonitrile and 0.1 % TFA.
Product Type	Growth Factors
Immunogen Species	Homo sapiens (Human)
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by inducing alkaline phosphatase production of murine ATDC5 cells is less than 2.0 µg/ml, corresponding to a specific activity of > 500 IU/mg.
Purity	> 95 % as determined by SDS-PAGE
Sequence	TAFASRHGKR HGKKSRLRCS KKPLHVNFKL LGWDDWIIAP LEYEAYHCEG VCDFPLRSHL EPTNHAIQIT LMNSMDPGST PPSCCVPTKL TPISILYIDA GNNVVYKQYE DMVVESCGCR
Research Area	Signal Transduction
Source	E.Coli
Target Names	GDF6
Expression Region	336-455aa
Tag Info	Tag-Free
Mol. Weight	13.6 kDa



Protein Length	Full Length of Mature Protein
PubMed ID	15489334; 18425797; 23307924; 19129173; 19864492; 24033328; 26643732; 29130651
Image	<div data-bbox="438 412 847 759">  </div> <div data-bbox="868 412 1342 510"> <p>(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.</p> </div>
Endotoxin	Less than 0.1 EU/ug as determined by LAL method.
Shelf Life	<p>The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.</p> <p>Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.</p>