

Datasheet for ABIN2666777
GDF2 Protein (AA 319-428)[Go to Product page](#)

1 Image

Overview

Quantity:	10 µg
Target:	GDF2
Protein Characteristics:	AA 319-428
Origin:	Mouse
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg of cytokine as determine by the LAL method

Target Details

Target:	GDF2
Alternative Name:	BMP-9 (GDF2 Products)
Background:	BMP-9 was initially isolated from fetal mouse liver cDNA libraries. The mouse and human proteins share 84 % identity. They are part of the bone morphogenetic protein (BMP) family of proteins, which are members of the TGF-β superfamily and play a key role in skeletal development, bone formation, and stem cell differentiation. BMP-9 is one of the most

Target Details

osteogenic factors of the family. It is synthesized by hepatocytes and intrahepatic biliary epithelial cells. It circulates in plasma in an unprocessed, inactive form, that can be further activated by furin as well as a mature and fully active complex form bound to its prodomain. BMPs signal through heterotetrameric complex receptors, which include four type I receptors (ALK-1, ALK-2, ALK-3, and ALK-6) and three type II receptors (BMPRII, ActRIIA, and ActRIIB). BMP-9 and BMP-10 bind to ALK-1 (mainly expressed in endothelial cells). BMP-9 inhibits the proliferation of endothelial cells induced by basic FGF and VEGF-stimulated angiogenesis by binding to ALK-1. BMP-9 also binds to ALK-2 in primary myeloma cells, and this binding can be inhibited by membrane-bound or soluble endoglin (an accessory receptor for the TGF- β family). BMP-9 activity is inhibited by crossveinless-2 (CV2), a member of the chordin family and an extracellular regulator. BMP-9 induces CV2 expression in endothelial cells and in a negative feedback loop inhibits its own activity by the binding of CV2 to BMP-9, which consequently inhibits its binding to ALK-1. BMP-9 and -10 possess tumor suppressing activity in breast and prostate cancer, BMP-9 also induces apoptosis in primary myeloma cells. In contrast, autocrine BMP-9 signaling induces proliferation of ovarian and liver cancer cells.

Molecular Weight: The 110 amino acid recombinant protein has a predicted molecular mass of approximately 12 kDa. The DTT-reduced and non-reduced protein migrate at approximately 14 kDa and 24 kDa respectively by SDS-PAGE. The predicted N-terminal amino acid is Ser.

Pathways: [Transition Metal Ion Homeostasis](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Comment: Biological activity: ED₅₀ = 0.5 - 3 ng/ml, corresponding to a specific activity of 0.33 - 2.0 x 10⁶ units/mg, as determined by induction of alkaline phosphatase in ATDC5 cells in a dose dependent manner.

Restrictions: For Research Use only

Handling

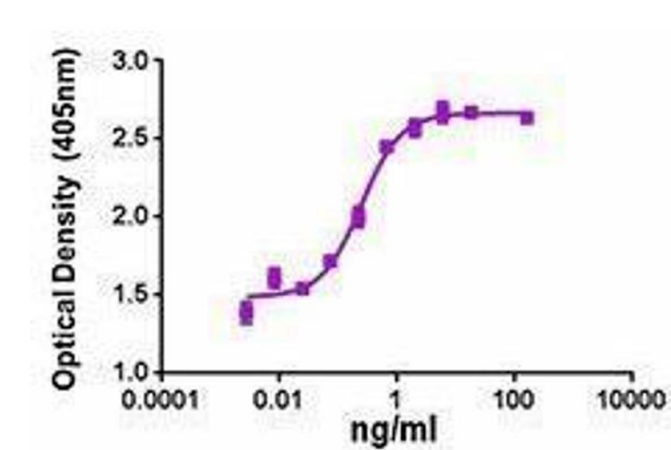
Format: Liquid

Reconstitution: For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 μ g/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.

Handling

Buffer:	0.22 µm filtered protein solution is in 0.1 % TFA, <30 % ACN.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.

Images



ELISA

Image 1.