Myocilin Protein, Human (HEK293, His)

Cat. No.:	HY-P75931
Synonyms:	Myocilin; Myocilin 55 kDa subunit; MYOC; GLC1A; TIGR
Species:	Human
Source:	HEK293
Accession:	Q99972 (M1-M504)
Gene ID:	4653
Molecular Weight:	Approximately 33 kDa

PROPERTIES

AA Sequence	MRFFCARCCS FGPEMPAVQL LLLACLVWDV GARTAQLRKA NDQSGRCQYT FSVASPNESS CPEQSQAMSV IHNLQRDSST QRLDLEATKA RLSSLESLLH QLTLDQAARP QETQEGLQRE LGTLRREDRDQ LETQTRELET AYSNLLRDKS VLEEEKKRLR QENENLARRL ESSSQEVARL RRGQCPQTRD TARAVPPGSR EVSTWNLDTL AFQELKSELT EVPASRILKE SPSGYLRSGE GDTGCGELVW VGEPLTLRTA ETITGKYGVW MRDPKPTYPY TQETTWRIDT VGTDVRQVFE YDLISQFMQG YPSKVHILPR PLESTGAVVY SGSLYFQGAE SRTVIRYELN TETVKAEKEI PGAGYHGQFP YSWGGYTDID LAVDEAGLWV IYSTDEAKGA IVLSKLNPEN LELEQTWETN IRKQSVANAF IICGTLYTVS SYTSADATVN FAYDTGTGIS KTLTIPFKNR YKYSSMIDYN PLEKKLFAWD NLNMVTYDIK LSKM
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Myocilin is a secreted glycoprotein that orchestrates the activation of diverse signaling pathways in neighboring cells, exerting control over various cellular processes such as cell adhesion, cytoskeleton organization, and cell migration. It plays a pivotal role in promoting substrate adhesion, spreading, and the formation of focal contacts, while concurrently exerting a negative regulatory influence on cell-matrix adhesion and stress fiber assembly through Rho protein signal transduction. Myocilin also modulates the organization of the actin cytoskeleton by stimulating stress fiber formation, interacting with components of Wnt signaling pathways. Additionally, it facilitates cell migration through the activation of PTK2 and subsequent phosphatidylinositol 3-kinase signaling. Myocilin's impact extends to bone formation, where it dose-dependently promotes osteoblast differentiation via mitogen-activated protein kinase signaling, and it plays a crucial role in myelination within the peripheral nervous system through ERBB2/ERBB3 signaling. Moreover, Myocilin serves as a regulator of muscle hypertrophy through interactions with components of the dystrophin-associated protein complex and participates in the positive regulation of mitochondrial depolarization. It is implicated in neurite outgrowth and may contribute to the obstruction of fluid outflow in the trabecular meshwork. Myocilin forms homodimers, primarily via its N-terminus, and can assemble into higher-order oligomers. It engages in interactions with various proteins, including OLFM3, FN1, NRCAM, GLDN, NFASC, MYL2, SFRP1, FRZB, FZD7, FZD10, FZD1, WIF1, SNTA1, ERBB2, ERBB3, and SNCG, influencing diverse cellular functions and pathways.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA