

Product Data Sheet

UNC5B Protein, Human (HEK293, His)

Cat. No.:	HY-P74481		
Synonyms:	Netrin receptor UNC5B; p53RDL1; UNC5B; P53RDL1; UNC5H2		
Species:	Human		
Source:	HEK293		
Accession:	Q8IZJ1 (G27-P363)		
Gene ID:	219699		
Molecular Weight:	Approximately 48-52 kDa		

PROPERTIES

/www.ocquence	GTDSGSEVLP	DSFPSAPAEP	LPYFLQEPQD	ΑΥΙVΚΝΚΡΥΕ		
	LRCRAFPATQ	IYFKCNGEWV	SQNDHVTQEG	LDEATGLRVR		
	EVQIEVSRQQ	VEELFGLEDY	WCQCVAWSSA	GTTKSRRAYV		
	RIAYLRKNFD	QEPLGKEVPL	DHEVLLQCRP	PEGVPVAEVE		
	WLKNEDVIDP	TQDTNFLLTI	DHNLIIRQAR	LSDTANYTCV		
	AKNIVAKRRS	ΤΤΑΤΥΙΥΥΝ	GGWSSWAEWS	PCSNRCGRGW		
	QKRTRTCTNP	A P L N G G A F C E	G Q A F Q K T A C T	TICPVDGAWT		
	EWSKWSACST	ECAHWRSREC	MAPPPQNGGR	DCSGTLLDSK		
	NCTDGLCMQN	KKTLSDP				
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized UNC5B at 5 μg/mL (100 μL/well) can bind rmNetrin-1. The ED ₅₀ for this effect is 306.6 ng/mL.					
Appearance	Lyophilized powder					
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.					
Endotoxin Level	<1 EU/µg, determined by LAL method.					
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ 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 UNC5B, a crucial receptor for netrin, emerges as a key player in axon guidance, primarily mediating axon repulsion in

neuronal growth cones during the development of the nervous system upon ligand binding. This repulsive effect is suggested to be orchestrated by its association with DCC, potentially triggering signaling pathways leading to axon repulsion. Beyond its role in neural development, UNC5B operates as a netrin receptor with negative regulatory impact on vascular branching during angiogenesis, facilitating the retraction of tip cell filopodia on endothelial growth cones in response to netrin. Notably, UNC5B also functions as a dependence receptor, inducing apoptosis when not engaged with the netrin ligand, a process that involves the activation of DAPK1. In the absence of netrin, UNC5B activates DAPK1 by reducing its autoinhibitory phosphorylation, thereby enhancing its catalytic activity. The receptor engages in diverse protein interactions, including the cytoplasmic part of DCC, GNAI2, FLRT3, FLRT2, and FLRT3 in a context-dependent manner, underlining its multifaceted role in axon guidance, angiogenesis regulation, and apoptotic signaling.

Caution: Product has not been fully validated for medical applications. For research use only.

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