

UNC5B Protein, Human (HEK293, hFc)

Cat. No.:	HY-P74482
Synonyms:	Netrin receptor UNC5B; p53RDL1; UNC5B; P53RDL1; UNC5H2
Species:	Human
Source:	HEK293
Accession:	Q8IZJ1 (M1-P363)
Gene ID:	219699
Molecular Weight:	Approximately 64.8 kDa

PROPERTIES

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.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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.
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Caution: Product has not been fully validated for medical applications. For research use only.

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