

## ROBO2 Protein, Human, Recombinant (His)

### General Information

Synonyms:	SAX3;roundabout homolog 2 (Drosophila);ROBO2;KIAA1568
Protein Construction:	A DNA sequence encoding the human ROBO2 (Q9HCK4-1) (Met1-Pro859) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ser 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9HCK4-1
Molecular Weight:	94.2 kDa (predicted); 116 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

ROBO2 belongs to the ROBO family. Members of the ROBO family are a group of highly conserved transmembrane glycoproteins that make up a small subgroup of the immunoglobulin (Ig) superfamily. They are best known for their roles as receptors for the Slit family of repellent axon guidance cues. In structure, ROBOs are characterized by five C2-type Ig-like repeats, three fibronectin type III domains, a transmembrane region, and an intracellular domain with three (ROBO3) or four (ROBO1, 2) CC (conserved cytoplasmic) motifs. ROBO2 is a receptor for SLIT2,

and probably SLIT1, which are thought to act as molecular guidance cue in cellular migration, including axonal navigation at the ventral midline of the neural tube and projection of axons to different regions during neuronal development. ROBO2 also abrogates SLIT-ROBO signaling in vitro.

### Reference

Brose K, et al. (1999) Slit proteins bind Robo receptors and have an evolutionarily conserved role in repulsive axon guidance. *Cell*. 96(6):795-806.

Brose K, et al. (1999) Slit2-Mediated chemorepulsion and collapse of developing forebrain axons. *Neuron*. 22(3):463-73.

Nagase T, et al. (2001) Prediction of the coding sequences of unidentified human genes. XVIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. *DNA Res*. 7(4):273-81.

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