# Product Datasheet

Applications | Antibody Details | Antigen Details | References

## Overview

| | |
|---|---|
| Antigen | Slit-1 |
| Immunogen | Purified recombinant fragment of Human Slit-1, corresponding to AA: 509 - 722). |
| Host/isotype | Rabbit/IgG |
| Clonality | Recombinant monoclonal |
| Clone name | IPI-SLIT1.75 |
| RRID | AB_3751926 |
| IPI ID | TAB0013143-013 |
| Specificity | Slit-1; Does not cross-react with other Slits. |
| Species | human and mouse |
| Concentration | 1 mg/mL |
| Purification | Expressed in HEK293T cells and affinity purified using Protein A |
| Storage Buffer | PBS, pH 7.4 |
| Shipping | Shipped on blue ice at +4 °C |
| Storage | Store at +4C for up to 3 months. For long-term storage, aliquot and store at -20C. Avoid multiple freeze/thaw cycles. |

## IPI Tested Applications ‡

| Applications | Tested Concentration | Result | Reference |
|---|---|---|---|
| SPR | 4 µg/mL | Positive | https://doi.org/10.57733/addgene.bybr4q |
| IHC | 10 µg/mL | Positive | https://doi.org/10.57733/addgene.mcv4t1 |

‡ Not suitable for WB application.

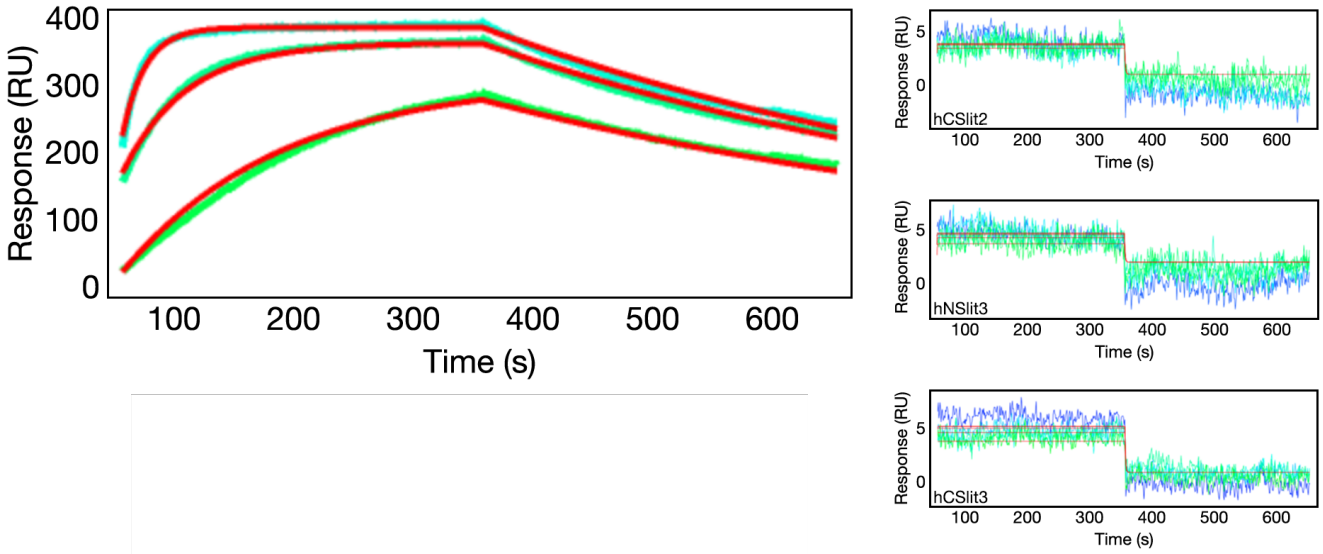
## Community Data *

| Application | Lab | Reference |
|---|---|---|
| ICC | Homaira Nawabi, Ph.D., Inserm | https://doi.org/10.57733/addgene.dckoln |

* Community data is generated by external partner labs, in the process of evaluating IPI antibody panels.

## Applications

### Surface Plasmon Resonance (SPR)




**Kinetic Parameters**

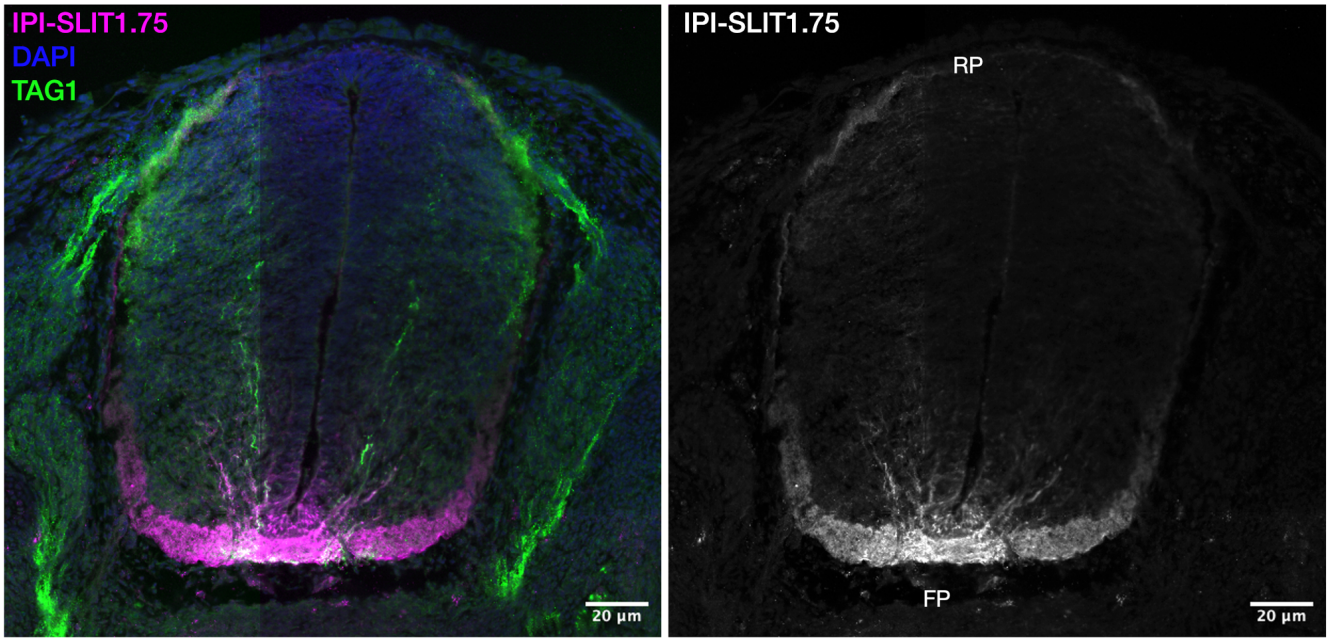
| $k_a$ ($M^{-1}s^{-1}$) | $k_d$ ($s^{-1}$) | $K_D$ (M) | $R_{max}$ | Res SD |
|---|---|---|---|---|
| $1.20\times10^{6}$ | $1.80\times10^{-3}$ | $1.60\times10^{-9}$ | 448.00 | 6.70 |

**Surface Plasmon Resonance (SPR) kinetics analysis of the interaction between Anti-Slit-1 [IPI-SLIT1.75] and Slit-1.**

SPR binding kinetics were measured on a Carterra LSA using HC30M chips (Carterra, cat. #4279) at 25 °C. Goat anti-rabbit IgG Fc (Jackson ImmunoResearch, cat. #111-005-046) was immobilized via amine coupling, and test antibodies were captured using a 96-channel print-head. Antigens (400 nM to five lower concentrations, 2-fold dilutions) were injected in antigen buffer (20 mM HEPES pH 7.4, 150 mM NaCl, 1 mM $CaCl_2$, 1 mM $MgCl_2$, 0.005% Tween 80) with 300 s association/ dissociation phases and acid regeneration. Data (reference/buffer subtracted, smoothed) were globally fit to a 1:1 Langmuir model to derive ka, kd, and KD using Carterra Kinetics software v1.9.2.44.63, and replotted in OriginPro 2023b. Results show a high-affinity and specific binding event between the antibody and antigen.

doi: https://doi.org/10.57733/addgene.bybr4q

## Immunohistochemistry (IHC)




**Immunohistochemistry (IHC) for Anti-Slit-1 [IPI-SLIT1.75]**

Immunohistochemistry (IHC) of a 20 micron cryosection of the spinal cord of an E13 mouse embryo. Confocal images taken at 20X magnification on an ImageXpress confocal HT.ai microscope. Left image shows IPI-SLIT1.75 (magenta), commissural axon-labeling counterstain TAG1 (green) and DAPI (blue); the right image shows only IPI-SLIT1.75. IPI-SLIT1.75 was used at 10 ug/mL (1:100 dilution).

doi: https://doi.org/10.57733/addgene.mcv4t1

# Antibody Details

## Antibody Design and Production

Human variable domains for the heavy and light chain of the FAB fragment used in yeast display were grafted onto the constant CH1, CH2 and CH3 domains of rabbit IgG. The chimera human/rabbit IgG1 construct was recombinantly expressed in HEK293 cells, using pTipi2.1 as the expression vector. The antibody was purified by affinity chromatography using protein A (XYZ) and acid elution, followed by immediate buffer exchange using 1 x PBS buffer pH 7.4.

**Sequence information:** Heavy chain and light chain amino acid sequences are available upon request after purchase. Contact us to request.

# Antibody Characterization

## LC-MS

LC-MS: Intact mass analysis via LC-MS methods allows for confirmation antibody mass, and to identify any product-related variants such as glycosylation. Before conducting intact mass analysis via LC-MS, the antibody was reduced to its heavy chain (HC) and light chain (LC). This process allows for confirmation of the masses corresponding to the amino acid sequences of both chains.

## LC-MS Results

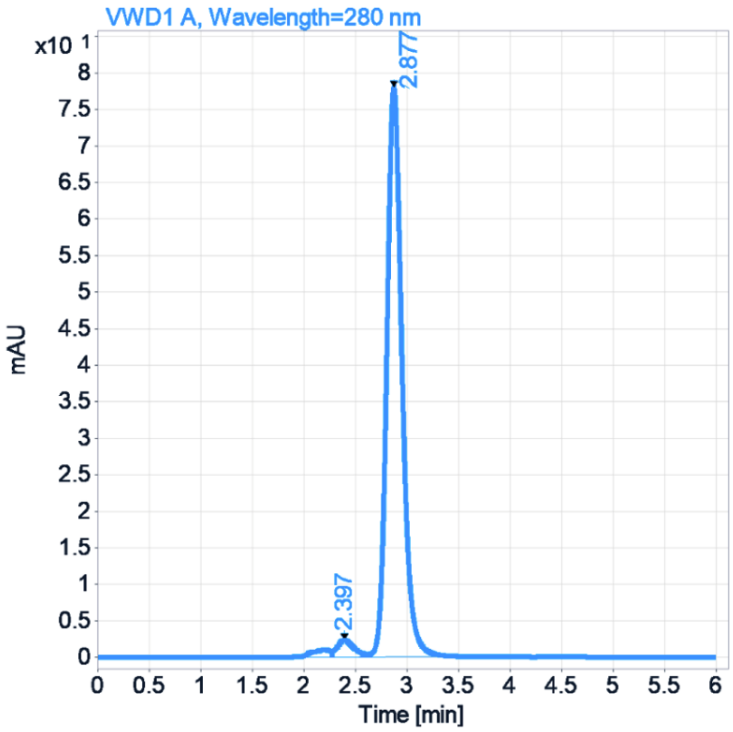
| LC Calculated | LC Observed | LC Delta | HC Calculated | HC Observed | HC Delta |
|---|---|---|---|---|---|
| 22944.51 | 22944.36 | -0.15 | 49693.18 | 49700.10 | 6.92 |

**Heavy Chain (HC) Mass Calculation:** The calculated molecular weight (MW) of the HC is derived by adding the mass of the unmodified HC amino acid sequence to the mass of the predominant N-glycan form (G0F), which is 1444.5 Da. This calculation assumes that the intrachain disulfide bonds remain intact. For HCs with an N-terminal glutamine (Q), the mass of Q is converted to pyroglutamic acid (PyroGlu), resulting in a deduction of 17.03 Da from the total mass. Additionally, for HCs with a Cterminal lysine (K), the mass of K (128.09 Da) is also subtracted.

**Light Chain (LC) Mass Calculation:** The calculated molecular weight (MW) of the LC is obtained from the mass of the unmodified LC amino acid sequence, assuming that the intrachain disulfide bonds are not reduced. For LCs with an N-terminal glutamine (Q), the mass of Q is converted to pyroglutamic acid (PyroGlu), leading to a deduction of 17.03 Da from the total mass. For LCs with a C-terminal lysine (K), the mass of K (128.09 Da) is subtracted as well.

## Size Exclusion Chromatography (SEC)

5 µL of 1±0.2 mg/mL of sample was analyzed with TSKgel® SuperSW mAb HTP (4 µm) HPLC Column in 1X PBS, pH 7.4 as the mobile phase.




| Clone | RT (min) | Width (min) | Area | Height | Area % | Result |
|---|---|---|---|---|---|---|
| IPI-SLIT1.75 | 2.88 | 0.16 | 814.25 | 77.97 | 96.76 | Pass |

**Interpretation:** SEC-QC pass. Main peak with greater than 90% purity and within retention time of 2.6 to 3.26 mins.

# Antigen Details

**Immunogen sequence : Human Slit-1 (AA: 509 - 722):**

SDVVCPHKCRCEANVVECSSLKLTKIPERIPQSTAELRLNNNEISILEATGMFKKLTHLKKINLSNNKVSEIEDGAFEGAAS
VSELHLTANQLESIRSGMFRGLDGLRTLMLRNNRISCIHNDSFTGLRNVRLLSLYDNQITTVSPGAFDTLQSLSTLNLLAN
PFNCNCQLAWLGGWLRKRKIVTGNPRCQNPDFLRQIPLQDVAFPDFRCEEGGGGGSGGGGSYPYDVPDYAGSGGLN
DIFEAQKIEWHEGSGHHHHHHHH

**Sequence information:**

HUGO: 11085
Uniprot: O75093
Refseq: NM_003061.3

**Structural information:**

Topology: Secreted extracellular protein
PDB IDs: -
Alphafold: AF-O75093-F1

**Expression profile:**

Human Protein Atlas: ENSG00000101605

## References

1. A. Kachare, M. Anuganti, T. Riedel, and D. Moshinsky. (2026). SPR for Anti-Slit-1 [IPI-SLIT1.75]. Addgene. https://doi.org/10.57733/addgene.bybr4q
2. A. Morano, T. Riedel, and D. Moshinsky. (2026). IHC for Anti-Slit-1 [IPI-SLIT1.75]. Addgene. https://doi.org/10.57733/addgene.mcv4t1
3. A. Saintpierre and H. Nawabi. (2026). ICC for Anti-Slit-1 [IPI-SLIT1.75]. Addgene. https://doi.org/10.57733/addgene.dckoln

**How to cite this antibody:**

Anti-Slit-1 [IPI-SLIT1.75] - from Institute for Protein Innovation (IPI) (Addgene #259424; https://n2t.net/addgene:259424; RRID: AB_3751926).

If you publish research with this product, please let us know so that we can cite your paper.