Product Datasheet

Anti-Slit-2 [IPI-Slit2.37]

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Overview

Antigen	Slit-2
Immunogen	Purified recombinant fragment of Human Slit-2, corresponding to AA: 1122-1529.
Host/isotype	Rabbit/IgG
Clonality	Recombinant monoclonal
Clone name	IPI-Slit2.37
RRID	AB_3720936
IPI ID	TAB0013229-013-002
Specificity	Slit-2; Does not recognize other Slits
Species reactivity	human and mouse
Amount	100 µg
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 +4C
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‡

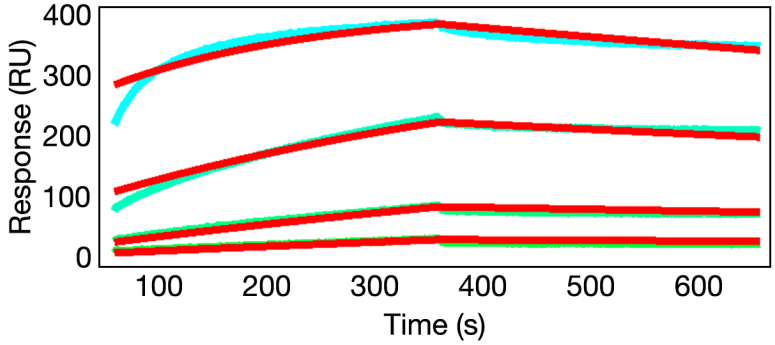
Application	Tested concentration	Result	Reference
SPR	2 µg/mL	Positive	https://doi.org/10.57733/addgene.10n9vm
IHC	10 µg/mL	Positive	https://doi.org/10.57733/addgene.qt3a6z

‡ Not suitable for WB application.

Applications

Surface Plasmon Resonance (SPR)

Anti-Slit-2 [IPI-Slit2.37]
Addgene #251722



Kinetic Parameters

k_a ($M^{-1}s^{-1}$)	k_d (s^{-1})	K_D (M)
$3.7x10^4$	$4.1x10^{-4}$	$1.1x10^{-8}$

Surface Plasmon Resonance (SPR) kinetics analysis of the interaction between Anti-Slit-2 [IPI-Slit2.37] and Human Slit-2. 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.10n9vm

Immunohistochemistry (IHC)

Anti-Slit-2 [IPI-Slit2.37]
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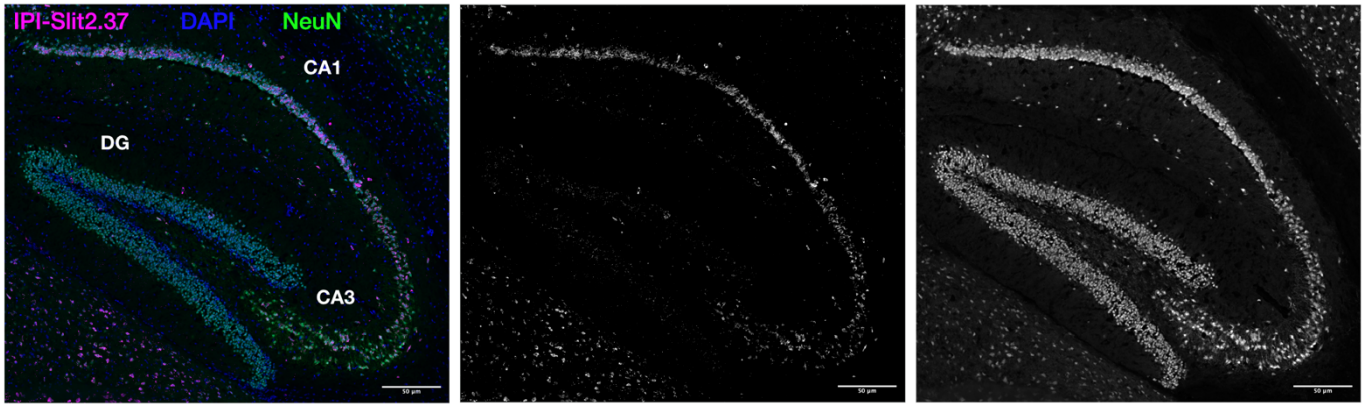


Anti-Slit-2 [IPI-Slit2.37] (Addgene#251722) shows strongest staining in the CA1 region of the hippocampus, weaker staining in CA3 and absent in DG, aligning with expression data detailed in the Allen Brain Atlas. Immunohistochemistry (IHC) of a 20 micron cryosection of the hippocampal section of an adult mouse brain. Confocal images taken at 20X magnification on an ImageXpress confocal HT.ai microscope. Left image shows IPI-SLIT2.37 (magenta), neuronal counterstain NeuN (green) and DAPI (blue); the middle image shows only shows IPI-SLIT2.37, and the rightmost image only shows NeuN. IPI-SLIT2.37 was used at 10 ug/mL (1:100 dilution). doi: https://doi.org/10.57733/addgene.qt3a6z

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 Expi 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

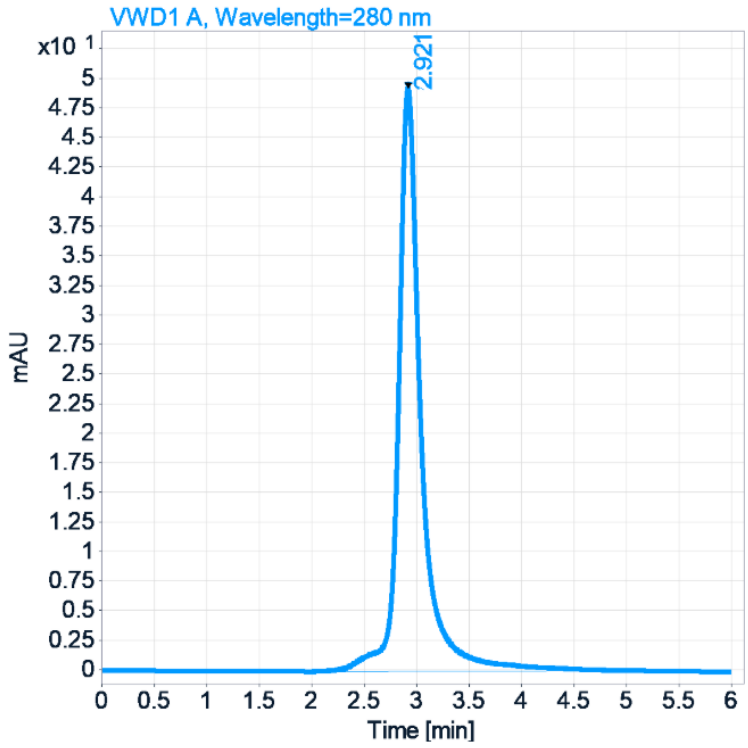
LC-MS: Intact mass analysis via LC-MS methods allows for confirmation antibody mass, and to identify any product-related variants such as glycosylation. Before conducting intact mass analysis via LC-MS, the antibody was reduced to its heavy chain (HC) and light chain (LC). This process allows for confirmation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

	HC MW (Da) *Calculated*	HC MW (Da) *Observed*	HC MW (Da) Delta	LC MW (Da) *Calculated*	LC MW (Da) *Observed*	LC MW (Da) Delta
IPI-Slit2.37	49490.85	49497.46	6.61	23817.39	23817.05	-0.34

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 C-terminal 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): SEC is a protein purification technique that separates molecules based on size.



	RT (min)	Width (min)	Area	Height	Area %	Result
IPI-Slit2.37	2.921	0.22	747.264	49.238	100	Pass

Antigen Details

Immunogen design:

cDNA of Human Slit-2 with C-terminal His-, Avi-, and HA-tags was produced in transiently transfected Expi293F cells and purified from culture supernatant by Ni-NTA affinity purification followed by size-exclusion chromatography.

Immunogen sequences:

>Human Slit-2 (AA: 1122-1529):
TSPCDNFDCQNGAQCIVRINEPICQCLPGYQGEKCEKLVSVNFINKESYLQIPSAKVRPQTNITLQIATDED
SGILLYKGDKDHIAVELYRGRVRASYDTGSHPASAIYSVETINDGNFHIVELLALDQSLSLSVDGGNPKIITN
LSKQSTLNFDSPLYVGGMPGKSNVASLRQAPGQNGTSFHGCIRNLYINSELQDFQKVPMQTGILPGCEP
CHKKVCAHGTCQPSSQAGFTCECQEGWMGPLCDQRTNDPCLGNKCVHGTCLPINAFSYSCKCLEGH
GGVLCDEEEDLFNPCQAIKCKHGKCRLSGLGQPYCECSSGYTGDSCDREISCRGERIRDYYQKQQGYA
ACQTTKKVSRLECRGGCAGGQCCGPLRSKRRKYSFECTDGSSFVDEVEKVVKCGCTRCVSGSGEDQV
DPRLIDGKGSGHHHHHHHHHHGSGGLNDIFEAQKIEWHE

Sequence information:

HUGO:	11086
Uniprot:	O94813
Refseq:	XM_024347470.1

Structural information:

Topology:	Secreted
PDB IDs:	2V70;2V9S;2V9T;2WFH
Alphafold:	AF-O94813-F1

Expression profiles:

Human Protein Atlas: ENSG00000145147

References

1. A. Kachare, M. Anuganti, T. Riedel, and D. Moshinsky. (2026). SPR for Anti-Slit-2 [IPI-Slit2.37]. Addgene. https://doi.org/10.57733/addgene.10n9vm
2. A. Morano, T. Riedel, and D. Moshinsky. (2026). IHC for Anti-Slit-2 [IPI-Slit2.37]. Addgene. https://doi.org/10.57733/addgene.qt3a6z

How to cite this antibody:
Anti-Slit-2 [IPI-Slit2.37] - from Institute for Protein Innovation (IPI) (Addgene #251722; http://n2t.net/addgene:251722; RRID: AB_3720936).

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