

SUPPLEMENTAL Table S1

List of primary antibodies for immunofluorescence immunohistochemistry & western blotting

Target	Catalog #	Company	Clonality Isotype	Host	MW (kDa) on WB	IHC*	WB
Parvalbumin	NBP2-50036	Novus	Polyclonal IgY	Chicken	NS	Yes (IF)	No
	NB120-11427	Novus	Polyclonal IgG	Rabbit	12	Yes (DAB)	No
Nrg-1	66492-1-Ig	ProteinTech	Monoclonal IgG1	Mouse	67	Yes (IF)	No
ErbB4	4795S	Cell Signaling	Monoclonal IgG	Rabbit	150	No	Yes
	GTX80811	GeneTex	Monoclonal IgG2b	Mouse	150	Yes (IF)	
Phospho (Tyr 1162) ErbB4	PA5-12606	ThermoFisher	Polyclonal IgG	Rabbit	150	No	Yes
Akt	2920S	Cell Signaling	Monoclonal IgG1	Mouse	60	No	Yes
Phospho (Ser 473) Akt	9271S	Cell Signaling	Polyclonal IgG	Rabbit	60	No	Yes
Syt2	808402	DSHB	Monoclonal IgG2a	Mouse	60	Yes (IF)	No
Vglut2	ab216463	Abcam	Monoclonal IgG	Rabbit	64	Yes (IF)	No
GFAP	16825-1-AP	ProteinTech	Polyclonal IgG	Rabbit	50	No	Yes
	Z0334	DAKO North America	Polyclonal IgG	Rabbit	NS	Yes (DAB)	No
α-fodrin	FG6090	Enzo Life Sciences	Monoclonal IgG1	Mouse	250, 150, 120	No	Yes

ErbB4, erb-b2 receptor tyrosine kinase 4; **GFAP**, Glial fibrillary acidic protein; **Nrg1**, Neuregulin 1; **Phospho**, phosphorylated form; **WB**, Western Blot; **NS**, Not suitable for western blots; **MW**, Molecular Weight. *, post WB validation.

Negative controls for immunofluorescence. The used subtypes and species-specific immunoglobulin were as follows:

- i. Rabbit IgG isotype (Vector Laboratories, Inc; Burlingame, CA, USA; RRID: AB_2336355)
- ii. Mouse IgG isotype (Vector Laboratories, Inc; RRID: AB_2532954)
- iii. Chicken IgY isotype (R&D Systems; RRID: AB_354263)

Additional blocking for IHC-IF. Goat F(ab) Anti-Mouse IgG H&L. (Jackson ImmunoResearch 115-007-003; RRID: AB_2338476) Goat secondary antibody prepared via immunoaffinity chromatography using Mouse IgG coupled agarose beads against a monospecific antiserum. Additional blocking when performing IF protocols that involved Mouse IgG antibodies was used on mice that exhibited heavy injury.