

Supplementary Material

Role of Piezo2 in Schwann Cell Volume Regulation and Its Impact on Neurotrophic Release Regulation

Chawapun Suttinont^a Katsuyuki Maeno^a Mamiko Yano^a Kaori Sato-Numata^b
Tomohiro Numata^b Moe Tsutsumi^a

^aMIRAI Technology Institute, Shiseido Co., Ltd., Yokohama, Japan, ^bDepartment of Integrative Physiology, Graduate School of Medicine, Akita University, Akita, Japan

Supplementary Table1 The secretome of HSCs by discovering proteomic analysis using liquid chromatography-tandem mass spectrometry (LC-MS/MS). Analysis targeting nerve/axonal growth factors identified 89 candidate secretion-related proteins that exhibited a 20% or more upregulation after 10 min of hypotonic stimulation compared to isotonic solutions.

Accession number	Description
P43699	Homeobox protein Nkx-2.1 OS=Homo sapiens OX=9606 GN=NKX2-1 PE=1 SV=1
Q96CW1	AP-2 complex subunit mu OS=Homo sapiens OX=9606 GN=AP2M1 PE=1 SV=2
O75582	Ribosomal protein S6 kinase alpha-5 OS=Homo sapiens OX=9606 GN=RPS6KA5 PE=1 SV=1
P12931	Proto-oncogene tyrosine-protein kinase Src OS=Homo sapiens OX=9606 GN=SRC PE=1 SV=3
Q7L576-2	Isoform 2 of Cytoplasmic FMR1-interacting protein 1 OS=Homo sapiens OX=9606 GN=CYFIP1
Q02750-2	Isoform 2 of Dual specificity mitogen-activated protein kinase kinase 1 OS=Homo sapiens OX=9606 GN=MAP2K1
P49768-2	Isoform 2 of Presenilin-1 OS=Homo sapiens OX=9606 GN=PSEN1
Q99685-2	Isoform 2 of Monoglyceride lipase OS=Homo sapiens OX=9606 GN=MGLL
Q9UPN3-5	Isoform 4 of Microtubule-actin cross-linking factor 1, isoforms 1/2/3/5 OS=Homo sapiens OX=9606 GN=MACF1
P20849-3	Isoform 3 of Collagen alpha-1(IX) chain OS=Homo sapiens OX=9606 GN=COL9A1
P49841	Glycogen synthase kinase-3 beta OS=Homo sapiens OX=9606 GN=GSK3B PE=1 SV=2
Q12837	POU domain, class 4, transcription factor 2 OS=Homo sapiens OX=9606 GN=POU4F2 PE=1 SV=2
P06241-2	Isoform 2 of Tyrosine-protein kinase Fyn OS=Homo sapiens OX=9606 GN=FYN

O00468	Agrin OS=Homo sapiens OX=9606 GN=AGRN PE=1 SV=6
Q8TAM2-4	Isoform 4 of Tetratricopeptide repeat protein 8 OS=Homo sapiens OX=9606 GN=TTC8
P10636-6	Isoform Tau-D of Microtubule-associated protein tau OS=Homo sapiens OX=9606 GN=MAPT
P23771	Trans-acting T-cell-specific transcription factor GATA-3 OS=Homo sapiens OX=9606 GN=GATA3 PE=1 SV=1
P20849-2	Isoform 2 of Collagen alpha-1(IX) chain OS=Homo sapiens OX=9606 GN=COL9A1
Q8TEW0-5	Isoform 5 of Partitioning defective 3 homolog OS=Homo sapiens OX=9606 GN=PARD3
P50458	LIM/homeobox protein Lhx2 OS=Homo sapiens OX=9606 GN=LHX2 PE=1 SV=2
P01111	GTPase NRas OS=Homo sapiens OX=9606 GN=NRAS PE=1 SV=1
Q92823-4	Isoform 4 of Neuronal cell adhesion molecule OS=Homo sapiens OX=9606 GN=NRCAM
Q9HCM2-2	Isoform 2 of Plexin-A4 OS=Homo sapiens OX=9606 GN=PLXNA4
P20265-3	Isoform N-OCT 5B of POU domain, class 3, transcription factor 2 OS=Homo sapiens OX=9606 GN=POU3F2
Q8TEW0	Partitioning defective 3 homolog OS=Homo sapiens OX=9606 GN=PARD3 PE=1 SV=2
P48061	Stromal cell-derived factor 1 OS=Homo sapiens OX=9606 GN=CXCL12 PE=1 SV=1
P15692-11	Isoform L-VEGF165 of Vascular endothelial growth factor A OS=Homo sapiens OX=9606 GN=VEGFA
P19174	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase gamma-1 OS=Homo sapiens OX=9606 GN=PLCG1 PE=1 SV=1
O60462-3	Isoform A17 of Neuropilin-2 OS=Homo sapiens OX=9606 GN=NRP2
O95631	Netrin-1 OS=Homo sapiens OX=9606 GN=NTN1 PE=1 SV=2
O43639	Cytoplasmic protein NCK2 OS=Homo sapiens OX=9606 GN=NCK2 PE=1 SV=2
Q9UJX6-2	Isoform 2 of Anaphase-promoting complex subunit 2 OS=Homo sapiens OX=9606 GN=ANAPC2
Q7Z4P5	Growth/differentiation factor 7 OS=Homo sapiens OX=9606 GN=GDF7 PE=2 SV=2
O14640-2	Isoform 2 of Segment polarity protein dishevelled homolog DVL-1 OS=Homo sapiens OX=9606 GN=DVL1
P18085	ADP-ribosylation factor 4 OS=Homo sapiens OX=9606 GN=ARF4 PE=1 SV=3
O95754-2	Isoform Short of Semaphorin-4F OS=Homo sapiens OX=9606 GN=SEMA4F
P54257	Huntingtin-associated protein 1 OS=Homo sapiens OX=9606 GN=HAP1 PE=1 SV=3
P23560-4	Isoform 4 of Brain-derived neurotrophic factor OS=Homo sapiens OX=9606 GN=BDNF
Q92876	Kallikrein-6 OS=Homo sapiens OX=9606 GN=KLK6 PE=1 SV=1
P60484-3	Isoform 3 of Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN OS=Homo sapiens OX=9606 GN=PTEN
Q9Y252-2	Isoform 2 of E3 ubiquitin-protein ligase RNF6 OS=Homo sapiens OX=9606 GN=RNF6

P41221	Protein Wnt-5a OS=Homo sapiens OX=9606 GN=WNT5A PE=1 SV=2
O75093	Slit homolog 1 protein OS=Homo sapiens OX=9606 GN=SLIT1 PE=1 SV=4
Q04759-2	Isoform 2 of Protein kinase C theta type OS=Homo sapiens OX=9606 GN=PRKCC
P56178-2	Isoform 2 of Homeobox protein DLX-5 OS=Homo sapiens OX=9606 GN=DLX5
P43034	Platelet-activating factor acetylhydrolase IB subunit beta OS=Homo sapiens OX=9606 GN=PAFAH1B1 PE=1 SV=2
Q8NI36	WD repeat-containing protein 36 OS=Homo sapiens OX=9606 GN=WDR36 PE=1 SV=1
Q14247	Src substrate cortactin OS=Homo sapiens OX=9606 GN=CTTN PE=1 SV=2
Q9BXC9	Bardet-Biedl syndrome 2 protein OS=Homo sapiens OX=9606 GN=BBS2 PE=1 SV=1
Q9NTI2	Phospholipid-transporting ATPase IB OS=Homo sapiens OX=9606 GN=ATP8A2 PE=1 SV=3
P01137	Transforming growth factor beta-1 proprotein OS=Homo sapiens OX=9606 GN=TGFB1 PE=1 SV=2
P10451-3	Isoform C of Osteopontin OS=Homo sapiens OX=9606 GN=SPP1
P54826	Growth arrest-specific protein 1 OS=Homo sapiens OX=9606 GN=GAS1 PE=2 SV=2
P01112-2	Isoform 2 of GTPase HRas OS=Homo sapiens OX=9606 GN=HRAS
Q9NQC3	Reticulon-4 OS=Homo sapiens OX=9606 GN=RTN4 PE=1 SV=2
P20265	POU domain, class 3, transcription factor 2 OS=Homo sapiens OX=9606 GN=POU3F2 PE=1 SV=4
Q9NQC3-2	Isoform B of Reticulon-4 OS=Homo sapiens OX=9606 GN=RTN4
Q6IBS0	Twinfilin-2 OS=Homo sapiens OX=9606 GN=TWF2 PE=1 SV=2
Q14155	Rho guanine nucleotide exchange factor 7 OS=Homo sapiens OX=9606 GN=ARHGEF7 PE=1 SV=2
O14672-2	Isoform 2 of Disintegrin and metalloproteinase domain-containing protein 10 OS=Homo sapiens OX=9606 GN=ADAM10
Q9H254	Spectrin beta chain, non-erythrocytic 4 OS=Homo sapiens OX=9606 GN=SPTBN4 PE=1 SV=2
Q16555	Dihydropyrimidinase-related protein 2 OS=Homo sapiens OX=9606 GN=DPYSL2 PE=1 SV=1
P35052	Glypican-1 OS=Homo sapiens OX=9606 GN=GPC1 PE=1 SV=2
P09496-2	Isoform Non-brain of Clathrin light chain A OS=Homo sapiens OX=9606 GN=CLTA
O60674	Tyrosine-protein kinase JAK2 OS=Homo sapiens OX=9606 GN=JAK2 PE=1 SV=2
O15075	Serine/threonine-protein kinase DCLK1 OS=Homo sapiens OX=9606 GN=DCLK1 PE=1 SV=2
P06756	Integrin alpha-V OS=Homo sapiens OX=9606 GN=ITGAV PE=1 SV=2
P50570	Dynamin-2 OS=Homo sapiens OX=9606 GN=DNM2 PE=1 SV=2
Q9H165-2	Isoform 2 of B-cell lymphoma/leukemia 11A OS=Homo sapiens OX=9606 GN=BCL11A
P62491	Ras-related protein Rab-11A OS=Homo sapiens OX=9606 GN=RAB11A PE=1 SV=3

P14780	Matrix metalloproteinase-9 OS=Homo sapiens OX=9606 GN=MMP9 PE=1 SV=3
Q13439-5	Isoform 5 of Golgin subfamily A member 4 OS=Homo sapiens OX=9606 GN=GOLGA4
P12755	Ski oncogene OS=Homo sapiens OX=9606 GN=SKI PE=1 SV=1
P10070	Zinc finger protein GLI2 OS=Homo sapiens OX=9606 GN=GLI2 PE=1 SV=4
P20936	Ras GTPase-activating protein 1 OS=Homo sapiens OX=9606 GN=RASA1 PE=1 SV=1
Q9GZM8-2	Isoform 2 of Nuclear distribution protein nudE-like 1 OS=Homo sapiens OX=9606 GN=NDEL1
Q13275	Semaphorin-3F OS=Homo sapiens OX=9606 GN=SEMA3F PE=2 SV=2
Q9Y6N7	Roundabout homolog 1 OS=Homo sapiens OX=9606 GN=ROBO1 PE=1 SV=1
P55268	Laminin subunit beta-2 OS=Homo sapiens OX=9606 GN=LAMB2 PE=1 SV=2