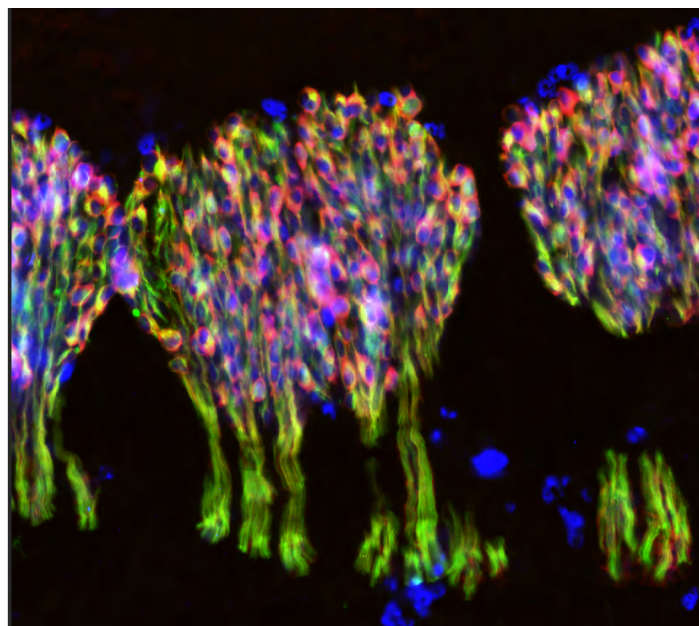
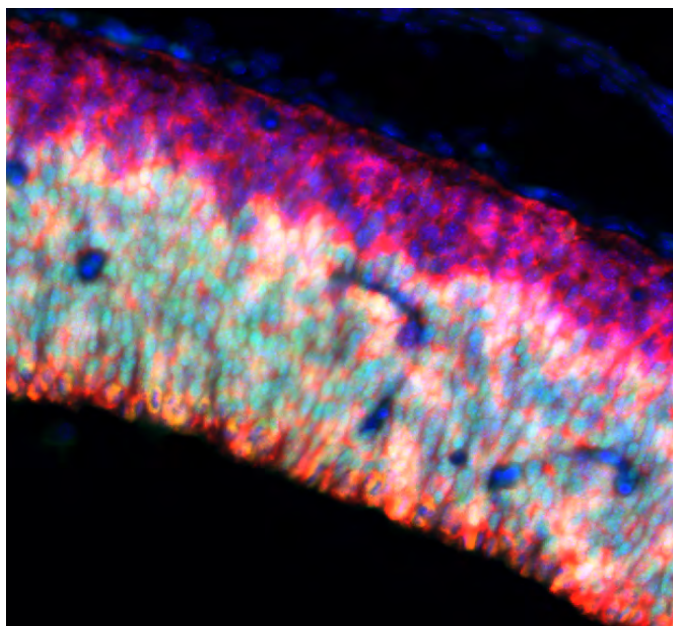
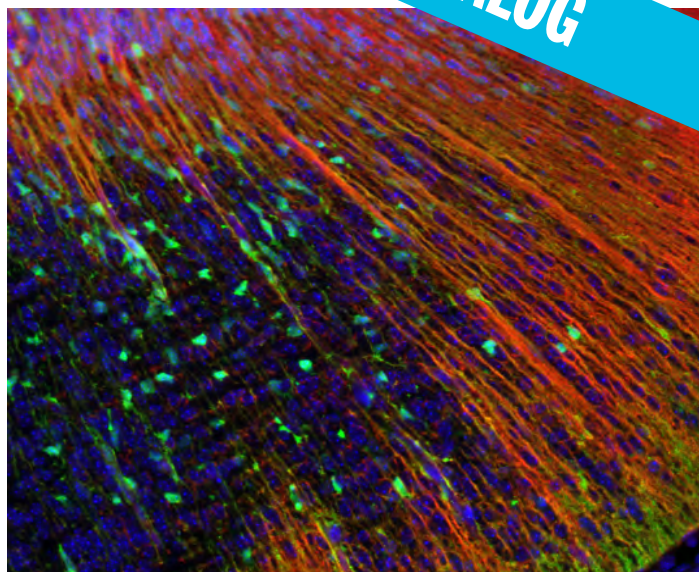
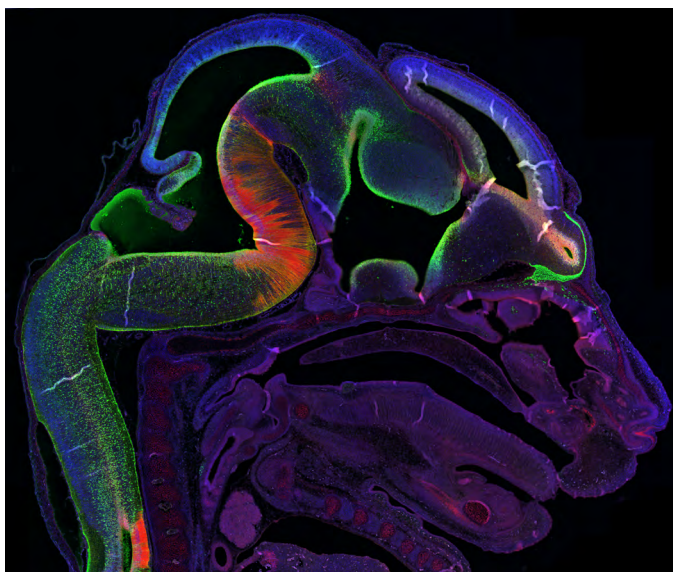


NEUROSCIENCE

FULL CATALOG



PRIMARY ANTIBODIES FOR

NEUROSCIENCE

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Cover Image:

Top (left and right): Radial glia in the developing brainstem of mouse embryo E14.

Anti-FABP7 (BLBP) monoclonal (AMAb90595), green.

Anti-GLAST (SLC1A3) polyclonal (HPA037467), red.

Bottom (left): Neural progenitors in the developing cerebral cortex of mouse embryo E11.

Anti-SOX2 monoclonal (IgG1, AMAb91307), green.

Anti-MS11 (Musashi-1) polyclonal (HPA074923), red.

DAPI, blue.

Bottom (right): Neurons in the developing dorsal root ganglia of the mouse embryo E11.

Anti-NEFM monoclonal (IgG1, AMAb91027), green.

Anti-MAP2 polyclonal (HPA012828), red.

Anti-RBFOX3 polyclonal (IgG2b, AMAb91748), blue.

PRIMARY ANTIBODIES



Precise. Accurate. Targeted.

PrecisA Monoclonals™ are mouse monoclonal primary antibodies developed against a number of carefully selected targets. Clones are selected to recognize only unique non-overlapping epitopes and isotypes. Available as **25 µL** and **100 µL** unit size.



Atlas Antibodies Advanced Polyclonals.

Triple A Polyclonals™ are rabbit polyclonal primary antibodies developed within the Human Protein Atlas project. IHC characterization data from 44 normal and 20 cancer tissues is available on the Human Protein Atlas portal. Available as **25 µL** and **100 µL** unit size.

PrEST Antigens

PrEST Antigens™ are the immunogens used for the generation of Triple A Polyclonals and PrecisA Monoclonals, for use as blocking agents and positive assay controls together with the corresponding antibody. The protein-specific PrEST sequences are designed to have a sequence identity as low as possible to other human proteins. The product numbers of PrEST control antigens start with "**APrEST**" and they are specified on the product pages for all antibodies under "related products".

ENHANCED VALIDATION



At Atlas Antibodies, we extensively validate our antibodies in IHC, WB, and ICC-IF. Enhanced Validation is performed as an additional layer of security in an application and context-specific manner.

Enhanced validation offers increased security of antibody specificity in a defined context.

This is ensured by using the ideal validation method for each combination of protein, sample, and application. Enhanced Validation follows the guidelines proposed by the International Working Group for Antibody Validation (IWGAV).



RECOMBINANT EXPRESSION VALIDATION

The antibody binding is verified using and over-expressed or tagged version of the target protein.



ORTHOGONAL VALIDATION

The antibody is validated by comparing the results with a non-antibody based method across multiple samples.



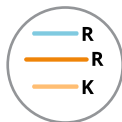
VALIDATION BY INDEPENDENT ANTIBODIES

The antibody specificity is demonstrated by comparing two antibodies targeting different regions of the same protein.



GENETIC VALIDATION

Antibody specificity is confirmed by downregulating the target protein on a genetic level using siRNA.



MIGRATION CAPTURE MS VALIDATION

The staining pattern and the protein size detected by the antibody is compared with results obtained by a capture Mass Spectrometry (MS) method.

THE HUMAN PROTEIN ATLAS



The Human Protein Atlas is a Swedish-based program initiated in 2003 with the aim to map all the human proteins in cells, tissues and organs using an integration of various omics technologies, including antibody-based imaging, mass spectrometry-based proteomics, transcriptomics and systems biology. All the data in the knowledge resource is open access to allow scientists both in academia and industry to freely access the data for exploration of the human proteome.

The Human Protein Atlas consists of **12** separate sections, each focusing on a particular aspect of the genome-wide analysis of the human proteins:

- The **TISSUE SECTION**, showing the distribution of the proteins across all major tissues and organs in the human body.
- The **BRAIN SECTION**, exploring the distribution of proteins in various regions of the mammalian brain.
- The **SINGLE CELL TYPE SECTION**, showing expression of protein-coding genes in single human cell types based on scRNA-seq.
- The **TISSUE CELL TYPE SECTION**, showing expression of protein-coding genes in human cell types based on bulk RNAseq data.
- The **PATHOLOGY SECTION**, showing the impact of protein levels for the survival of patients with cancer.
- The **IMMUNE CELL SECTION**, showing expression of protein-coding genes in immune cell types.
- The **BLOOD PROTEIN SECTION**, describing proteins detected in blood and proteins secreted by human tissues.
- The **SUBCELLULAR SECTION**, showing the subcellular localization of proteins in single cells.
- The **CELL LINE SECTION**, showing expression of protein-coding genes in human cell lines.
- The **METABOLIC SECTION**, exploring expression of protein-coding genes in the context of the human metabolic network.
- The **DISEASE SECTION**, a comprehensive and precise protein levels in blood covering 12 different cancer types.
- The **STRUCTURE SECTION**, the experimental and predicted 3D structure of proteins.

AGING AND NEUROLOGICAL DISORDERS

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ADAR	AMAb90535	Monoclonal	IHC, WB*, ICC-IF	86% - 85%
	HPA003890	Polyclonal	IHC*, WB*, ICC-IF	86% - 85%
Anti-AIMP1	HPA018476	Polyclonal	IHC, WB*, ICC-IF	96% - 97%
Anti-AKT1	AMAb90834	Monoclonal	WB, ICC-IF	97% - 97%
Anti-AOX1	HPA040199	Polyclonal	IHC*	84% - 86%
Anti-APBA3	HPA045577	Polyclonal	IHC	70% - 68%
Anti-APBB2	HPA023542	Polyclonal	IHC, WB*, ICC-IF	85% - 83%
Anti-APBB3	HPA005571	Polyclonal	IHC, ICC-IF	84% - 84%
Anti-APOA4	AMAb90769	Monoclonal	IHC, WB	65% - 28%
Anti-APP	HPA001462	Polyclonal	IHC*, WB*	95% - 95%
Anti-AQP4	AMAb90537	Monoclonal	IHC*, WB	93% - 92%
	HPA014784	Polyclonal	IHC*, WB, ICC-IF	93% - 92%
Anti-ATF2	HPA022134	Polyclonal	IHC, WB, ICC-IF	99% - 99%
Anti-ATF3	AMAb90909	Monoclonal	IHC*, ICC-IF	92% - 92%
	HPA001562	Polyclonal	IHC, ICC-IF	92% - 92%
Anti-ATRX	AMAb90784	Monoclonal	IHC, WB*, ICC-IF	96% - 97%
Anti-ATXN1	HPA008335	Polyclonal	IHC	81% - 81%
Anti-ATXN2	HPA018295	Polyclonal	IHC*, WB*, ICC-IF	90% - 91%
Anti-C3	HPA020432	Polyclonal	IHC*	78% - 23%
Anti-CASP3	HPA002643	Polyclonal	IHC*, WB, ICC-IF	84% - 88%
Anti-CD4	AMAb90754	Monoclonal	IHC*, WB	55% - 57%
Anti-CD40	AMAb90905	Monoclonal	IHC*, WB	58% - 54%
Anti-CHGA	AMAb90525	Monoclonal	IHC, WB, ICC-IF	62% - 64%
Anti-COX1	HPA002834	Polyclonal	IHC*, WB, ICC-IF	93% - 90%
Anti-COX2/PTGS2	HPA001335	Polyclonal	IHC, ICC-IF	88% - 88%
Anti-CTSB	HPA018156	Polyclonal	IHC*, ICC-IF	79% - 79%
Anti-CTSD	HPA003001	Polyclonal	IHC, WB	86% - 86%
Anti-CXorf27	HPA003356	Polyclonal	IHC	47% - 46%
Anti-FBXO7 (PARK15)	HPA032114	Polyclonal	IHC	78% - 81%
Anti-FUS	AMAb90549	Monoclonal	IHC*, WB*, ICC-IF,	91% - 91%
Anti-GSK3B	HPA028017	Polyclonal	IHC, WB*, ICC-IF	100% - 100%
Anti-HIP1	HPA017964	Polyclonal	IHC*, WB	79% - 77%
Anti-HTRA2 (PARK13)	HPA027366	Polyclonal	IHC, WB*	57% - 63%
Anti-ITGAM (CD11b)	AMAb90911	Monoclonal	IHC*, WB	67% - 68%
Anti-ITM2B	HPA029292	Polyclonal	IHC, ICC-IF	95% - 96%
Anti-LRP2	HPA005980	Polyclonal	IHC*	78% - 36%
Anti-MSR1	HPA000272	Polyclonal	IHC*, WB*	60% - 59%
Anti-NFKB1	HPA027305	Polyclonal	IHC*, WB*, ICC-IF	60% - 62%
Anti-OPTN	HPA003360	Polyclonal	IHC, WB*, ICC-IF	64% - 68%
Anti-PADI4	HPA017007	Polyclonal	IHC*, WB*	66% - 69%
Anti-PARK7	HPA004190	Polyclonal	IHC, WB	89% - 90%
Anti-PFN1	AMAb91181	Monoclonal	IHC, WB*	87% - 87%
Anti-PHGDH	AMAb90786	Monoclonal	IHC, WB, ICC-IF	99% - 99%
	HPA021241	Polyclonal	IHC, WB*, ICC-IF	99% - 99%
Anti-PRNP	HPA042754	Polyclonal	IHC*	91% - 91%
Anti-PSEN1	HPA030760	Polyclonal	IHC	82% - 81%
Anti-RHOT1	AMAb90852	Monoclonal	IHC, WB	100% - 100%
	HPA010687	Polyclonal	IHC	100% - 100%
Anti-S100A8	HPA024372	Polyclonal	IHC*, WB, ICC-IF	56% - 60%
Anti-SERPINA3	HPA002560	Polyclonal	IHC*, WB	60% - 59%

* Products with enhanced validation for indicated application

AGING AND NEUROLOGICAL DISORDERS cont.

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-SNCB	HPA035876	Polyclonal	IHC*,WB*	97% - 97%
Anti-SOD1	HPA001401	Polyclonal	IHC*,WB*,ICC-IF	82% - 81%
Anti-SOD2	HPA001814	Polyclonal	IHC,WB	88% - 87%
Anti-THY1	AMAb90844	Monoclonal	IHC,WB	64% - 68%
	HPA003733	Polyclonal	IHC*,ICC-IF	64% - 68%
Anti-TNFRSF21	HPA006746	Polyclonal	IHC,WB*	86% - 85%
Anti-TTR	AMAb90649	Monoclonal	IHC*, WB	81% - 83%
Anti-UBE2K	HPA028869	Polyclonal	IHC,ICC-IF	100% - 100%
Anti-UCHL1	HPA005993	Polyclonal	IHC*,WB*,ICC-IF	97% - 97%
Anti-USP46	AMAb90722	Monoclonal	WB*,ICC-IF	100% - 99%
Anti-VPS26A	AMAb90967	Monoclonal	IHC*, WB*,ICC-IF	96% - 100%
Anti-WHSC1	AMAb90851	Monoclonal	IHC,WB,ICC-IF	91% - 91%
	HPA015801	Polyclonal	IHC*,ICC-IF	91% - 91%
Anti-VWF	AMAb90928	Monoclonal	IHC,WB	80% - 80%
	HPA002082	Polyclonal	IHC	82% - 78%

CORTICAL LAYERS

Targeted Cortical Layer	Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Layer 1	Anti-RELN	AMAb91365	Monoclonal	IHC	90% - 94%
Layer 1	Anti-RELN	HPA046512	Polyclonal	ICC-IF	90% - 94%
Layer 2/3	Anti-RASGRF2	HPA018679	Polyclonal	IHC	72% - 71%
Layer 2/3	Anti-CALB1	HPA023099	Polyclonal	IHC*, WB, ICC-IF	98% - 99%
Layer 2/3-4	Anti-CUX1	AMAb91352	Monoclonal	IHC, ICC-IF	72% - 74%
		AMAb91353	Monoclonal	IHC, ICC-IF	72% - 74%
		HPA003277	Polyclonal	IHC	72% - 74%
Layers 2/3, 4 and 5b	Anti-POU3F2 (BRN2)	HPA056261	Polyclonal	ICC-IF	100% - 100%
		AMAb91406	Monoclonal	IHC, WB, ICC-IF	100% - 100%
		AMAb91407	Monoclonal	IHC, ICC-IF	100% - 100%
Layer 2-4 (mainly 4)	Anti-NECAB1	AMAb90798	Monoclonal	IHC, WB	98% - 98%
		AMAb90800	Monoclonal	IHC, WB	98% - 98%
		AMAb90801	Monoclonal	IHC, WB	98% - 98%
		HPA023629	Polyclonal	IHC*, WB	98% - 98%
		HPA031262	Polyclonal	IHC*	97% - 98%
Layer 5	Anti-PCP4	HPA005792	Polyclonal	IHC*	96% - 96%
Layer 5	CNTN6	HPA016645	Polyclonal	IHC	86% - 84%
Layers 5-6	Anti-BCL11B (CTIP2)	HPA049117	Polyclonal	IHC*, ICC-IF	96% - 98%
Layer 6	Anti-FOXP2	AMAb91361	Monoclonal	IHC, ICC-IF	99% - 97%
		AMAb91362	Monoclonal	IHC, ICC-IF	99% - 97%
		HPA000382	Polyclonal	IHC	99% - 97%
Layer 6	Anti-TLE4	HPA065357	Polyclonal	WB, ICC-IF	100% - 100%
Layer 6b	Anti-CTGF	AMAb91366	Monoclonal	IHC, WB	96% - 97%
		HPA031075	Polyclonal	IHC, WB, ICC-IF	96% - 97%

* Products with enhanced validation for indicated application

DEVELOPMENT

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ENG	AMAb90925	Monoclonal	IHC	66% - 22%
	HPA011862	Polyclonal	IHC, WB	66% - 22%
Anti-FABP7	AMAb90595	Monoclonal	IHC, WB	89% - 90%
	HPA028825	Polyclonal	IHC*, WB	89% - 90%
Anti-FLT1	AMAb90704	Monoclonal	IHC*, WB	80% - 82%
Anti-GAP43	HPA015600	Polyclonal	IHC*, ICC-IF	71% - 70%
Anti-GLI3	HPA005534	Polyclonal	IHC	74% - 76%
Anti-MEF2C	AMAb90727	Monoclonal	IHC, WB*, ICC-IF	97% - 47%
	HPA005533	Polyclonal	IHC*, WB*, ICC-IF	97% - 47%
Anti-MKI67 (Ki67)	HPA000451	Polyclonal	IHC*, ICC-IF	66% - 67%
Anti-NACC1	HPA021238	Polyclonal	IHC, ICC-IF	91% - 89%
Anti-NES (Nestin)	AMAb90556	Monoclonal	IHC, WB*, ICC-IF	47% - 42%
	HPA007007	Polyclonal	IHC*, WB*	47% - 42%
Anti-NKX2-2	HPA003468	Polyclonal	IHC, WB	96% - 97%
Anti-PAX6	HPA030775	Polyclonal	IHC, ICC-IF	100% - 100%
Anti-PBK	HPA005753	Polyclonal	IHC*, WB, ICC-IF	91% - 94%
Anti-REST	AMAb90740	Monoclonal	IHC, ICC-IF	41% - 43%
Anti-RUNX1	HPA004176	Polyclonal	IHC*, ICC-IF	93% - 93%
Anti-RUNX2	AMAb90591	Monoclonal	IHC, WB*, ICC-IF	100% - 81%
	HPA022040	Polyclonal	IHC*, WB*, ICC-IF	100% - 81%
Anti-SATB2	AMAb90679	Monoclonal	IHC, WB, ICC-IF	100% - 100%
	HPA029543	Polyclonal	IHC*, WB, ICC-IF	100% - 100%
Anti-SOX4	HPA029901	Polyclonal	IHC, ICC-IF	100% - 39%
Anti-SOX6	HPA001923	Polyclonal	IHC, ICC-IF	96% - 96%
Anti-SOX7	HPA009065	Polyclonal	IHC, WB	91% - 91%
Anti-SOX9	AMAb90795	Monoclonal	IHC, WB*, ICC-IF	97% - 96%
Anti-SOX11	AMAb90502	Monoclonal	IHC, WB	82% - 82%
	HPA000536	Polyclonal	IHC, WB	82% - 82%
Anti-SOX30	HPA006159	Polyclonal	IHC*, WB	68% - 70%
Anti-THY1	AMAb90844	Monoclonal	IHC, WB	64% - 68%
	HPA003733	Polyclonal	IHC*, ICC-IF	64% - 68%
Anti-TM4SF2/TSPAN7	HPA003140	Polyclonal	IHC, WB*	96% - 96%
	AMAb90621	Monoclonal	IHC, WB	96% - 96%
Anti-VANGL1	AMAb90600	Monoclonal	WB*, ICC-IF	95% - 95%
Anti-VIM	AMAb90516	Monoclonal	IHC, WB*	99% - 99%
	HPA001762	Polyclonal	IHC*, WB*, ICC-IF	99% - 99%

* Products with enhanced validation for indicated application

GLIOMA

Top 20 genes with highest significance associated with unfavorable prognosis in GBM.

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ADAM15	HPA011633	Polyclonal	IHC, WB	82% - 84%
Anti-ARMC10	HPA011036	Polyclonal	IHC*, WB*, ICC-IF	89% - 83%
Anti-CEND1	HPA042527	Polyclonal	IHC*, WB*	75% - 74%
Anti-DBNL	HPA020265	Polyclonal	IHC*, WB*	95% - 95%
Anti-EN2	HPA045646	Polyclonal	ICC-IF	87% - 87%
Anti-FAM174A	HPA019539	Polyclonal	IHC, WB*, ICC-IF	100% - 100%
Anti-KDEL2	HPA016459	Polyclonal	IHC	29% - 28%
Anti-LRRC61	HPA019355	Polyclonal	IHC, WB*, ICC-IF	89% - 90%
Anti-MED10	HPA042795	Polyclonal	WB*, ICC-IF	100% - 100%
Anti-MGAT4B	HPA012804	Polyclonal	ICC-IF	97% - 97%
Anti-PODNL1	HPA042807	Polyclonal	IHC	81% - 81%
Anti-PTPRN	HPA007152	Polyclonal	ICC-IF	81% - 81%
Anti-RPL39L	HPA047105	Polyclonal	IHC	95% - 95%
Anti-RPP25	HPA046900	Polyclonal	IHC, WB, ICC-IF	84% - 85%
Anti-SLC6A6	HPA016488	Polyclonal	IHC*	78% - 78%
Anti-SPAG4	HPA048393	Polyclonal	IHC	89% - 89%
Anti-STC1	HPA023918	Polyclonal	IHC	100% - 100%
Anti-TSPAN13	HPA007426	Polyclonal	IHC, ICC-IF	89% - 87%
Anti-WFDC2	HPA042302	Polyclonal	IHC*	63% - 41%
Anti-ZBED6CL	HPA019724	Polyclonal	IHC, WB*	29% - 30%

Top 20 genes with highest significance associated with favorable prognosis in GBM.

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ARHGAP12	HPA000412	Polyclonal	IHC*, WB	86% - 86%
Anti-CDYL	HPA035578	Polyclonal	IHC*, WB, ICC-IF	89% - 77%
Anti-ETNPPL	HPA044546	Polyclonal	IHC*, WB*	64% - 65%
Anti-MARS2	HPA035589	Polyclonal	IHC, ICC-IF	92% - 93%
Anti-MIER1	HPA019589	Polyclonal	IHC*, ICC-IF	97% - 96%
Anti-MTHFD2	HPA049657	Polyclonal	IHC	88% - 85%
Anti-NEUROD1	HPA003278	Polyclonal	IHC, WB*	98% - 97%
Anti-PATZ1	HPA047893	Polyclonal	IHC, ICC-IF	100% - 100%
Anti-RCOR3	HPA007621	Polyclonal	WB	96% - 97%
Anti-SAMD13	HPA058929	Polyclonal	IHC*, ICC-IF	100% - 50%
Anti-SLC39A10	HPA036512	Polyclonal	IHC, ICC-IF	93% - 93%
Anti-SOX21	AMAb91309	Monoclonal	IHC, WB	100% - 100%
Anti-STARD7	HPA064958	Polyclonal	ICC-IF	97% - 95%
Anti-TBL1XR1	HPA019182	Polyclonal	IHC*, WB, ICC-IF	96% - 97%
Anti-ZBTB6	HPA054111	Polyclonal	IHC	92% - 89%
Anti-ZFP1	HPA044916	Polyclonal	ICC-IF	70% - 76%
Anti-ZNF322	HPA043161	Polyclonal	IHC, WB	91% - 91%
Anti-ZNF420	HPA059675	Polyclonal	IHC, ICC-IF	31% - 31%
Anti-ZNF639	HPA049023	Polyclonal	IHC, ICC-IF	87% - 86%
Anti-ZNF821	HPA036372	Polyclonal	IHC*, ICC-IF	74% - 77%

* Products with enhanced validation for indicated application

Markers for the glioma tumor microenvironment

Product Name	Product Number	Clonality	Isotype	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ALDH1A3	AMAb91754	Monoclonal	IgG2a	IHC*, WB, ICC-IF*	90% - 95%
Anti-CHI3L1	AMAb91777	Monoclonal	IgG2b	IHC, WB	100% - 71%
	AMAb91778	Monoclonal	IgG1	IHC, WB	100% - 71%
Anti-EZH2	AMAb91749	Monoclonal	IgG2b	IHC*, WB, ICC-IF	100% - 100%
	AMAb91750	Monoclonal	IgG2a	IHC*, ICC-IF	100% - 100%
	AMAb91752	Monoclonal	IgG2b	IHC*, WB, ICC-IF	100% - 100%
Anti-FOXM1	AMAb91766	Monoclonal	IgG1	IHC, ICC-IF	100% - 100%
Anti-GLI1	AMAb91771	Monoclonal	IgG1	WB, ICC-IF	95% - 95%
	AMAb91772	Monoclonal	IgG1	IHC	95% - 95%
	AMAb91773	Monoclonal	IgG2b	IHC, ICC-IF	95% - 95%
Anti-ID1	AMAb91756	Monoclonal	IgG1	IHC, ICC-IF	100% - 100%
	AMAb91757	Monoclonal	IgG2a	IHC*, ICC-IF	100% - 100%
Anti-NF1	AMAb91741	Monoclonal	IgG2b	ICC-IF	100% - 100%
	AMAb91745	Monoclonal	IgG1	ICC-IF	100% - 100%
Anti-PTEN	AMAb91735	Monoclonal	IgG1	IHC*, WB	95% - 95%
	AMAb91736	Monoclonal	IgG2a	IHC*, WB	95% - 95%
Anti-POSTN	AMAb91763	Monoclonal	IgG2a	IHC*, ICC-IF	96% - 92%
	AMAb91764	Monoclonal	IgG2a	IHC*, ICC-IF	96% - 92%
Anti-RBFOX3 (NeuN)	AMAb91746	Monoclonal	IgG2b	IHC*	91% - 91%
	AMAb91748	Monoclonal	IgG2b	IHC*	91% - 91%
Anti-SALL4	AMAb91768	Monoclonal	IgG1	IHC*, WB, ICC-IF	80% - 85%
	AMAb91769	Monoclonal	IgG1	IHC*, WB, ICC-IF	80% - 85%
	AMAb91770	Monoclonal	IgG2a	ICC-IF	80% - 85%

Classical markers for the glioma classification

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ATRX	AMAb90784	Monoclonal	IHC, WB*, ICC-IF	96% - 97%
	HPA001906	Polyclonal	IHC*, WB*	96% - 97%
	HPA064684	Polyclonal	ICC-IF	51% - 57%
Anti-IDH1	AMAb90578	Monoclonal	IHC, WB*, ICC-IF	95% - 95%
	HPA035248	Polyclonal	IHC*, WB*	95% - 95%
	HPA057936	Polyclonal	IHC*, WB*	92% - 95%
Anti-GFAP	AMAb91033	Monoclonal	IHC*, WB*	98% - 100%
	HPA056030	Polyclonal	IHC*, WB, ICC-IF	98% - 100%

* Products with enhanced validation for indicated application

INTEGRINS

Markers for the alpha subunits

Product Name	Product Number	Clonality	Validated Applications	Selected Interaction Partners	Antigen sequence identity to mouse - rat
Anti-ITGA1/CD49a	AMAb91461	Monoclonal	IHC*, WB*	ITGB1, LAMA1	89% - 95%
Anti-ITGA2/CD49b	AMAb91469	Monoclonal	IHC*, WB	ITGB1, LAMA1	78% - 80%
Anti-ITGA3/CD49c	AMAb91446	Monoclonal	IHC*, WB*	ITGB1, ITGB4, ITGB5	84% - 82%
Anti-ITGA4/CD49d	HPA074961	Polyclonal	ICC-IF	ITGB3, VCAM	90% - 89%
Anti-ITGA5/CD49e	AMAb91449	Monoclonal	IHC*, WB*	ITGB1, ITGB3, ITGB5, FN1	85% - 82%
Anti-ITGA6/CD49f	AMAb91450	Monoclonal	IHC*	ITGB1, ITGB4	88% - 86%
Anti-ITGA7/ITGA7	HPA008427	Polyclonal	IHC, ICC-IF	ITGB1	94% - 91%
Anti-ITGA8/ITGA8	AMAb91468	Monoclonal	IHC*, WB	ITGB1	91% - 91%
Anti-ITGAD/CD11D	HPA026786	Polyclonal	IHC	ITGB2, ICAM3, VCAM1	76% - 77%
Anti-ITGAE/CD103	HPA036313	Polyclonal	IHC	ITGB7, CDH1	68% - 68%
Anti-ITGAM/CD11b	AMAb90911	Monoclonal	IHC*, WB	ITGB2, ICAM1	67% - 68%
Anti-ITGAV/CD51	HPA004856	Polyclonal	IHC, ICC-IF	ITGB1, ITGB3, ITGB5, ITGB6, ITGB8	88% - 90%
Anti-ITGA2B/CD41	HPA031170	Polyclonal	IHC*, WB	ITGB3	85% - 82%
Anti-ITGAX/CD11c	AMAb90915	Monoclonal	IHC*, WB	ITGB2	61% - 59%

Markers for the beta subunits

Product Name	Product Number	Clonality	Validated Applications	Selected Interaction Partners	Antigen sequence identity to mouse - rat
Anti-ITGB1/CD29	HPA059297	Polyclonal	IHC*, WB	ITGA1, ITGA2, ITGA3, ITGA5, ITGA6, ITGA7, ITGA8, ITGA9, ITGA10, ITGA11, ITGAV	91% - 91%
Anti-ITGB2/CD18	HPA016894	Polyclonal	IHC*, WB*, ICC-IF	ITGAL, ITGAD, ITGAM, ITGAX	89% - 86%
Anti-ITGB3/CD61	AMAb91470	Monoclonal	IHC*, WB	ITGA4, ITGA5, ITGA2B, ITGAV	92% - 90%
Anti-ITGB4/CD104	AMAb91454	Monoclonal	IHC*, WB	ITGA3, ITGA6, SMAD2, SMAD3	97% - 97%
Anti-ITGB5/ITGB5	HPA001820	Polyclonal	IHC	ITGA3, ITGA5, ITGAV	88% - 35%
Anti-ITGB6/ITGB6	HPA023626	Polyclonal	IHC, ICC-IF	ITGAV, MAPK1, FN1	90% - 88%
Anti-ITGB8/ITGB8	AMAb91467	Monoclonal	WB, ICC-IF	ITGAV, RHEB, FN1	85% - 85%

LAMININ-MARKER PANEL

Product Name	Product Number	Clonality	Validated Applications	Isotype	Antigen seq identity to mouse - rat
Anti-LAMA1	AMAb91091	Monoclonal	IHC, WB	IgG1	62% - 61%
	AMAb91117	Monoclonal	IHC*, WB	IgG1	89% - 91%
Anti-LAMA2	AMAb91166	Monoclonal	IHC*, WB	IgG1	96% - 98%
Anti-LAMA3	AMAb91123	Monoclonal	IHC, WB	IgG1	74% - 71%
Anti-LAMA4	AMAb91133	Monoclonal	IHC, WB	IgG2b	86% - 85%
	AMAb91134	Monoclonal	IHC*, WB	IgG1	86% - 85%
Anti-LAMA5	AMAb91124	Monoclonal	IHC*, WB*	IgG1	62% - 68%
Anti-LAMB1	AMAb91092	Monoclonal	IHC, WB	IgG1	90% - 89%
Anti-LAMB2	AMAb91096	Monoclonal	IHC, WB*	IgG1	83% - 82%
	AMAb91097	Monoclonal	IHC*, WB	IgG2a	83% - 82%
Anti-LAMB3	AMAb91160	Monoclonal	IHC, WB, ICC-IF	IgG1	75% - 76%
	AMAb91161	Monoclonal	IHC, WB	IgG1	75% - 76%
Anti-LAMC1	AMAb91136	Monoclonal	IHC, WB	IgG2b	91% - 91%
	AMAb91137	Monoclonal	IHC, WB	IgG1	91% - 91%
	AMAb91138	Monoclonal	IHC*, WB	IgG2b	86% - 89%
	AMAb91140	Monoclonal	IHC, WB	IgG1	86% - 89%
Anti-LAMC2	AMAb91098	Monoclonal	IHC*, WB*, ICC-IF	IgG1	83% - 79%

* Products with enhanced validation for indicated application

NEURAL LINEAGE MARKERS

Product Name	Product Number	Clonality	Neural Category	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ACTN1	HPA006035	Polyclonal	cytoskeleton	IHC,WB*	98% - 99%
Anti-ACTN4	HPA001873	Polyclonal	cytoskeleton	IHC,WB*,ICC-IF	99% - 98%
Anti-AIF	HPA049234	Polyclonal	microglia	IHC*	84% - 84%
Anti-CALB1 (CB)	HPA023099	Polyclonal	calcium binding protein	IHC*,WB,ICC-IF	98% - 99%
Anti-CALB2 (CR)	HPA007305	Polyclonal	calcium binding protein	IHC*,WB*,ICC-IF	100% - 100%
Anti-CD68	AMAb90874	Monoclonal	microglia	IHC,WB*	76% - 76%
	HPA048982	Polyclonal	microglia	IHC*,WB*	76% - 76%
Anti-CNP	AMAb91068	Monoclonal	oligodendrocytes	IHC,WB*	76% - 77%
	HPA023280	Polyclonal	oligodendrocytes	IHC*,WB*,ICC-IF	76% - 77%
Anti-EZR	AMAb90976	Monoclonal	astroglia	IHC*,WB*,ICC-IF	93% - 93%
	HPA021616	Polyclonal	astroglia	IHC*,WB*,ICC-IF	93% - 93%
Anti-GFAP	AMAb91033	Monoclonal	astrocytes	IHC*,WB*	98% - 100%
	HPA056030	Polyclonal	astrocytes	IHC*,WB,ICC-IF	98% - 100%
Anti-GLUL	AMAb91101	Monoclonal	astrocytes	IHC,WB*	95% - 53%
	HPA007316	Polyclonal	astrocytes	IHC,WB*	95% - 53%
Anti-ICAM5	HPA009083	Polyclonal	adhesion molecule	IHC	85% - 86%
Anti-INA	HPA008057	Polyclonal	cytoskeleton	IHC*,WB,ICC-IF	83% - 84%
Anti-ITGAM	AMAb90911	Monoclonal	microglia	IHC*,WB	67% - 68%
Anti-MAP1A	HPA039064	Polyclonal	cytoskeleton	IHC*	60% - 52%
Anti-MAP1B	HPA022275	Polyclonal	cytoskeleton	IHC*,WB*,ICC-IF	85% - 86%
Anti-MAP2	HPA008273	Polyclonal	cytoskeleton	IHC*,WB,ICC-IF	96% - 96%
Anti-MBP	AMAb91062	Monoclonal	Schwann cells	IHC,WB,ICC-IF	97% - 97%
	HPA049222	Polyclonal	Schwann cells	IHC,WB	97% - 97%
Anti-MCAM	HPA008848	Polyclonal	adhesion molecule	IHC*,WB*	75% - 73%
Anti-MKI67 (Ki67)	AMAb90870	Monoclonal	progenitors	IHC,ICC-IF	68% - 68%
	HPA000451	Polyclonal	progenitors	IHC*,ICC-IF	66% - 67%
Anti-MOG	HPA021873	Polyclonal	oligodendrocytes	IHC	91% - 89%
Anti-MYO5A	HPA001356	Polyclonal	cytoskeleton	IHC*,ICC-IF	99% - 98%
Anti-NCAM2	HPA030900	Polyclonal	adhesion molecule	IHC	89% - 91%
Anti-NECAB1	AMAb90801	Monoclonal	interneurons	IHC,WB	98% - 98%
	HPA023629	Polyclonal	interneurons	IHC*,WB	98% - 98%
Anti-NECAB2	AMAb90808	Monoclonal	interneurons	IHC	85% - 84%
	HPA013998	Polyclonal	interneurons	IHC*,ICC-IF	98% - 97%
Anti-NEFH (NF200)	AMAb91025	Monoclonal	neurons	IHC,WB	88% - 94%
	HPA061615	Polyclonal	neurons	IHC*	88% - 94%
Anti-NEFM (NF160)	AMAb91027	Monoclonal	neurons	IHC,WB	98% - 98%
	HPA022845	Polyclonal	cytoskeleton	IHC*,WB,ICC-IF	98% - 98%
Anti-NLGN1	HPA006680	Polyclonal	adhesion molecule	IHC,WB*	98% - 98%
Anti-PBK	HPA005753	Polyclonal	progenitors	IHC*,WB,ICC-IF	91% - 94%
Anti-PTPRC	AMAb90518	Monoclonal	microglia	IHC,WB	35% - 37%
	HPA000440	Polyclonal	microglia	IHC*,WB	35% - 37%
Anti-RBFOX3	HPA030790	Polyclonal	neuron nuclear marker	IHC*,ICC-IF	93% - 94%
Anti-S100A8	HPA024372	Polyclonal	macrophages	IHC*,WB,ICC-IF	56% - 60%
Anti-S100B	AMAb91038	Monoclonal	astrocytes	IHC*,WB	99% - 98%
	HPA015768	Polyclonal	S100 Ca+ binding protein B	IHC*,WB*,ICC-IF	99% - 98%
Anti-SCGN	AMAb90630	Monoclonal	interneurons	IHC,WB	96% - 96%
	HPA006641	Polyclonal	interneurons	IHC	96% - 96%
Anti-TMEM119	AMAb91528	Monoclonal	microglia	IHC*,WB,ICC-IF	52% - 46%
	HPA051870	Polyclonal	microglia	IHC*	52% - 46%
Anti-UCHL1	AMAb91145	Monoclonal	neurons	IHC,WB,ICC-IF	97% - 97%
	HPA005993	Polyclonal	neurons	IHC*,WB*,ICC-IF	97% - 97%

* Products with enhanced validation for indicated application

NEURAL LINEAGE GLIAL MARKERS

Product Name	Product Number	Clonality	Validated Application	Antigen sequence identity to mouse - rat
Anti-CSF3R/CD114	HPA048086	Monoclonal	IHC	58% - 60%
Anti-C21orf33	HPA018517	Polyclonal	IHC, ICC-IF	90% - 88%
Anti-GLI3	HPA005534	Polyclonal	IHC	74% - 76%
Anti-FABP7/BLBP	AMAb90595	Monoclonal	IHC*, WB	89% - 90%
Anti-FGF2	HPA065502	Polyclonal	IHC	97% - 97%
Anti-GFAP	AMAb91033	Monoclonal	IHC*, WB*	98% - 100%
Anti-HES5	HPA076164	Polyclonal	IHC	96% - 96%
Anti-NOTCH1	HPA067168	Polyclonal	ICC-IF	75% - 75%
Anti-PAX-6	AMAb91372	Monoclonal	IHC, ICC-IF	100% - 100%
Anti-PDGFD	HPA066271	Polyclonal	IHC	86% - 86%
Anti-SOX2	AMAb91307	Monoclonal	IHC, WB*, ICC-IF	99% - 99%
Anti-SLC1A3/GLAST	HPA037467	Polyclonal	IHC*, ICC-IF	89% - 95%
Anti-VIM	AMAb90516	Monoclonal	IHC, WB*	99% - 99%

Astroglial Markers

Product Name	Product Number	Clonality	Validated Application	Antigen sequence identity to mouse - rat
Anti-AQP4	AMAb90537	Monoclonal	IHC*, WB	93% - 92%
	HPA014784	Polyclonal	IHC*, WB, ICC-IF	93% - 92%
Anti-AQP9	HPA074762	Polyclonal	IHC*	55% - 55%
Anti-CD44	HPA005785	Polyclonal	IHC*, WB*, ICC-IF	51% - 47%
Anti-GFAP	AMAb91033	Monoclonal	IHC*, WB*	98% - 100%
	HPA056030	Polyclonal	IHC*, WB, ICC-IF	98% - 100%
	HPA063513	Polyclonal	IHC*	100% - 98%

Oligodendroglial Markers

Product Name	Product Number	Clonality	Validated Application	Antigen sequence identity to mouse - rat
Anti-PDGFR α (CD140)	HPA004947	Polyclonal	ICC-IF	-
Anti-MBP	HPA049222	Polyclonal	IHC, WB	97% - 97%
Anti-OLIG2	HPA003254	Polyclonal	IHC*, WB	93% - 94%
Anti-PROX1	HPA000842	Polyclonal	ICC-IF	100% - 93%
	HPA001030	Polyclonal	ICC-IF	100% - 99%
Anti-SOX10	AMAb91297	Monoclonal	IHC, ICC-IF	98% - 98%
Anti-SOX8	HPA058665	Polyclonal	IHC*, ICC-IF	73% - 70%
Anti-SOX9	AMAb90795	Monoclonal	IHC, WB*, ICC-IF	97% - 96%

* Products with enhanced validation for indicated application

NEURAL STEM CELLS

Neural Stem Cell (NSC) Markers

Product Name	Product Number	Clonality	Validated Application	Antigen sequence identity to mouse - rat
Anti-FABP7	AMAb90595	Monoclonal	IHC, WB	89% - 90%
Anti-BMI	HPA030472	Polyclonal	IHC, WB*	95% - 95%
Anti-PROML1	HPA004922	Polyclonal	IHC*	57% - 60%
Anti-EGFR/ERBB1	AMAb90819	Monoclonal	WB	90% - 91%
Anti-EGR1	HPA029937	Polyclonal	ICC-IF	93% - 94%
Anti-PCGF5	HPA038349	Polyclonal	IHC, ICC-IF	95% - 93%
Anti-REELIN	HPA046512	Polyclonal	ICC-IF	90% - 94%
Anti-SLC1A3/GLAST	HPA037468	Polyclonal	IHC*	93% - 93%
Anti-TLX/NR2E1	HPA055642	Polyclonal	IHC*	99% - 99%

Neuronal Stem Cell Markers

Product Name	Product Number	Clonality	Validated Application	Antigen sequence identity to mouse - rat
Anti-BRN2/POU3F2	AMAb91406	Monoclonal	IHC, WB, ICC-IF	100% - 100%
	HPA056261	Polyclonal	ICC-IF	100% - 100%
Anti-FGFR1	HPA056402	Polyclonal	IHC, WB	94% - 96%
Anti-FOXA2	HPA050505	Polyclonal	IHC*, ICC-IF	96% - 82%
Anti-MAP2	AMAb91375	Monoclonal	IHC, WB, ICC-IF	91% - 90%
Anti-NEFL	AMAb91314	Monoclonal	IHC, WB, ICC-IF	97% - 99%
Anti-NURR1/NR4A2	HPA000543	Polyclonal	IHC, ICC-IF	100% - 100%
Anti-PAX3	HPA063659	Polyclonal	IHC, ICC-IF	92% - 92%
	HPA069000	Polyclonal	ICC-IF	98% - 98%
Anti-PAX6	AMAb91372	Monoclonal	IHC, ICC-IF	100% - 100%
Anti-S100B	AMAb91038	Monoclonal	IHC*, WB	99% - 98%
Anti-SOX11	HPA000536	Polyclonal	IHC, WB	82% - 82%
Anti-SOX21	AMAb91309	Monoclonal	IHC, WB	100% - 100%
	HPA048337	Polyclonal	IHC	96% - 37%
	HPA064084	Polyclonal	ICC-IF	96% - 37%
Anti-SOX4	AMAb91378	Monoclonal	IHC, ICC-IF	78% - 78%
	AMAb91380	Monoclonal	IHC, ICC-IF	78% - 78%
Anti-TBR2/EOMES	HPA065458	Polyclonal	ICC-IF	96% - 96%
Anti-TUBB3	AMAb91394	Monoclonal	IHC, WB, ICC-IF	93% - 86%

* Products with enhanced validation for indicated application

NEUROINFLAMMATION

Product Name	Product Number	Clonality	Validated Applications	Isotype	Antigen sequence identity to mouse - rat
Anti-AGER	HPA064436	Polyclonal	WB, ICC-IF		41% - 41%
	AMAb91634	Monoclonal	IHC*	IgG2a	100% - 100%
	AMAb91635	Monoclonal	IHC*	IgG1	100% - 100%
Anti-AIF1	HPA049234	Polyclonal	IHC*		84% - 84%
	HPA062949	Polyclonal	ICC-IF		86% - 83%
	AMAb91671	Monoclonal	IHC	IgG2b	84% - 84%
	AMAb91672	Monoclonal	IHC	IgG1	84% - 84%
Anti-AMIGO3	AMAb91677	Monoclonal	WB	IgG1	95% - n.d.
Anti-ANO2	HPA057499	Polyclonal	IHC		84% - 85%
	AMAb91641	Monoclonal	IHC	IgG1	84% - 84%
	AMAb91642	Monoclonal	IHC	IgG1	84% - 84%
Anti-CD163	HPA046404	Polyclonal	IHC*, ICC-IF		51% - 30%
	HPA051974	Polyclonal	IHC*		75% - 83%
	AMAb91646	Monoclonal	IHC*, WB	IgG1	75% - 83%
	AMAb91648	Monoclonal	IHC*	IgG1	75% - 83%
Anti-CRYAB	HPA057100	Polyclonal	IHC*		98% - 98%
	AMAb91661	Monoclonal	IHC*, WB, ICC-IF	IgG1	100% - 95%
	AMAb91662	Monoclonal	IHC* WB	IgG2b	100% - 95%
Anti-CDH1	AMAb90862	Monoclonal	IHC*, WB*, ICC-IF	IgG2b	76% - 80%
Anti-CXCL13	AMAb91629	Monoclonal	IHC*	IgG1	-
Anti-DYSF	HPA017071	Polyclonal	IHC*, ICC-IF		96% - 96%
	HPA021945	Polyclonal	IHC*		88% - 88%
	AMAb91667	Monoclonal	IHC*, WB	IgG1	88% - 88%
Anti-FUS	AMAb90549	Monoclonal	IHC*, WB*, ICC-IF	IgG1	91% - 91%
Anti-GAP43	HPA013392	Polyclonal	IHC*, ICC-IF		88% - 86%
	HPA015600	Polyclonal	IHC*, ICC-IF		71% - 70%
	AMAb91664	Monoclonal	IHC*	IgG2b	85% - 85%
	AMAb91665	Monoclonal	IHC*	IgG1	85% - 85%
	AMAb91666	Monoclonal	IHC*	IgG2a	85% - 85%
Anti-GPR17	HPA029766	Polyclonal	IHC*		92% - 92%
	AMAb91624	Monoclonal	IHC*, WB	IgG1	95% - 95%
Anti-GZMB	HPA003418	Polyclonal	IHC*, WB*		63% - 63%
	AMAb91650	Monoclonal	IHC*	IgG1	63% - 63%
Anti-HLA-DRA	HPA050162	Polyclonal	IHC*		54% - 69%
	HPA053176	Polyclonal	IHC*		41% - 83%
	AMAb91673	Monoclonal	IHC*, WB	IgG1	50% - 90%
	AMAb91674	Monoclonal	IHC*, WB	IgG2a	50% - 90%
	AMAb91675	Monoclonal	IHC*, WB	IgG2b	50% - 90%
Anti-IL17A	AMAb91615	Monoclonal	IHC	IgG1	93% - 93%
Anti-IL17RA	AMAb91617	Monoclonal	WB	IgG2b	80% - 84%
	AMAb91619	Monoclonal	WB	IgG1	80% - 84%
Anti-IL7	AMAb91684	Monoclonal	ICC-IF	IgG1	-
	HPA019590	Polyclonal	IHC		46% - 46%
Anti-ITGA4	HPA074961	Polyclonal	ICC-IF		90% - 89%
	AMAb91699	Monoclonal	WB	IgG2b	100% - 100%
Anti-ITGB8	AMAb91467	Monoclonal	WB, ICC-IF	IgG1	85% - 85%
Anti-LAMC2	AMAb91098	Monoclonal	IHC*, WB*, ICC-IF	IgG1	83% - 79%
Anti-LAMA4	AMAb91134	Monoclonal	IHC*, WB	IgG1	86% - 85%
Anti-MS4A1	HPA014341	Polyclonal	IHC*, WB*, ICC-IF		73% - 77%
	HPA014391	Polyclonal	IHC*, WB*		61% - 64%
	AMAb91636	Monoclonal	IHC*, WB	IgG2a	74% - 78%

* Products with enhanced validation for indicated application

Product Name	Product Number	Clonality	Validated Applications	Isotype	Antigen sequence identity to mouse - rat
Anti-OPALIN	AMAb91685	Monoclonal	IHC*	IgG1	72% - 75%
	HPA014372	Polyclonal	IHC		72% - 75%
	AMAb91686	Monoclonal	IHC*	IgG2a	72% - 75%
Anti-PARP1	AMAb90959	Monoclonal	IHC, WB*, ICC-IF	IgG1	95% - 94%
Anti-PBRM1	AMAb90690	Monoclonal	IHC*, WB*	IgG1	97% - 96%
Anti-PLA2R1	AMAb90772	Monoclonal	IHC*, WB, ICC-IF	IgG1	74% - 76
Anti-PLP1	HPA004128	Polyclonal	IHC*		100% - 100%
	AMAb91639	Monoclonal	IHC*	IgG1	100% - 99%
Anti-RGMA	HPA039880	Polyclonal	ICC-IF		96% - 96%
	HPA044222	Polyclonal	ICC-IF		87% - 87%
	AMAb91702	Monoclonal	WB	IgG2b	100% - 100%
Anti-S100A8	HPA024372	Polyclonal	IHC*, WB*, ICC-IF		56% - 60%
	AMAb91689	Monoclonal	IHC*	IgG1	56% - 60%
Anti-S100A9	AMAb91690	Monoclonal	IHC*	IgG2a	59% - 64%
Anti-SERPINA3	HPA000893	Polyclonal	IHC*, WB		61% - 61%
	HPA002560	Polyclonal	IHC*, WB		60% - 59%
	AMAb91655	Monoclonal	IHC*	IgG1	60% - 56%
Anti-SNAI1	AMAb91215	Monoclonal	IHC*, ICC-IF	IgG1	82% - 82%
Anti-SATB2	AMAb90635	Monoclonal	IHC*, WB	IgG1	99% - 99%
	AMAb90682	Monoclonal	IHC, WB, ICC-IF	IgG1	99% - 99%
Anti-SOX4	AMAb91380	Monoclonal	IHC, ICC-IF	IgG1	78% - 78%
Anti-SPP1	AMAb91653	Monoclonal	IHC*	IgG1	56% - 53%
Anti-TBX19	AMAb91409	Monoclonal	IHC	IgG1	82% - 32%
Anti-TH	AMAb91112	Monoclonal	IHC	IgG1	88% - 88%
Anti-TLR2	AMAb91631	Monoclonal	WB	IgG1	100% - 100%
Anti-TRPM4	HPA041169	Polyclonal	IHC*, ICC-IF		93% - 91%
	AMAb91693	Monoclonal	IHC*, WB, ICC-IF	IgG1	93% - 91%
Anti-VGAT	AMAb91043	Monoclonal	IHC	IgG1	95% - 93%
Anti-VGLUT1	AMAb91041	Monoclonal	IHC*, WB	IgG2b	94% - 94%

* Products with enhanced validation for indicated application

NEUROSCIENCE MARKER PANEL

Target	Product Name	Product Number	Clonality	Validated Applications	Isotype	Antigen sequence identity to mouse - rat
Acetylcholine neurons	Anti-CHAT	AMAb91130	Monoclonal	IHC*, ICC-IF	IgG2b	96% - 96%
	Anti-CHAT	AMAb91129	Monoclonal	IHC*	IgG1	96% - 96%
Astrocytes	Anti-GFAP	AMAb91033	Monoclonal	IHC*, WB*	IgG1	98% - 100%
	Anti-S100B	AMAb91038	Monoclonal	IHC*, WB	IgG1	99% - 98%
	Anti-GLUL	AMAb91101	Monoclonal	IHC, WB*	IgG1	95% - 92%
	Anti-GLUL	AMAb91102	Monoclonal	IHC, WB*	IgG1	95% - 92%
	Anti-GLUL	AMAb91103	Monoclonal	IHC, WB	IgG2a	95% - 92%
Dopamine neurons	Anti-DAT	AMAb91125	Monoclonal	IHC	IgG1	85% - 85%
	Anti-DDC	AMAb91089	Monoclonal	IHC*, WB	IgG1	90% - 88%
	Anti-TH	AMAb91112	Monoclonal	IHC	IgG1	88% - 88%
GABA neurons	Anti-VGAT	AMAb91043	Monoclonal	IHC	IgG1	95% - 93%
	Anti-GAD1	AMAb91076	Monoclonal	IHC, WB	IgG2a	94%v94%
	Anti-GAD1	AMAb91078	Monoclonal	IHC, WB	IgG1	94% - 94%
	Anti-GAD1	AMAb91079	Monoclonal	IHC, WB	IgG2b	94% - 94%
	Anti-GAD2	AMAb91048	Monoclonal	IHC*, WB	IgG1	84% - 88%
Glutamate neurons	Anti-VGLUT1	AMAb91041	Monoclonal	IHC*, WB	IgG2b	94%v94%
	Anti-VGLUT2	AMAb91081	Monoclonal	IHC*	IgG1	94% - 94%
	Anti-VGLUT2	AMAb91086	Monoclonal	IHC	IgG1	94% - 94%
Neurons	Anti-NEFM	AMAb91027	Monoclonal	IHC, WB	IgG1	98% - 98%
	Anti-NEFM	AMAb91028	Monoclonal	IHC, WB	IgG1	98% - 98%
	Anti-NEFM	AMAb91029	Monoclonal	IHC, WB	IgG2a	98% - 98%
	Anti-NEFM	AMAb91030	Monoclonal	IHC, WB	IgG2b	98% - 98%
	Anti-NEFH	AMAb91025	Monoclonal	IHC, WB	IgG1	88% - 94%
	Anti-UCHL1	AMAb91145	Monoclonal	IHC, WB, ICC-IF	IgG1	97% - 98%
Noradrenaline neurons	Anti-NET	AMAb91116	Monoclonal	IHC	IgG1	n.d.
Oligodendrocytes	Anti-MOG	AMAb91066	Monoclonal	IHC, WB	IgG1	91% - 89%
	Anti-MOG	AMAb91067	Monoclonal	IHC, WB	IgG1	91% - 89%
	Anti-CNP	AMAb91068	Monoclonal	IHC, WB*	IgG2a	76% - 77%
	Anti-CNP	AMAb91069	Monoclonal	IHC, WB	IgG1	76% - 77%
	Anti-CNP	AMAb91072	Monoclonal	IHC, WB, ICC-IF	IgG2b	76% - 77%
	Anti-MBP	AMAb91062	Monoclonal	IHC, WB, ICC-IF	IgG2a	97% - 97%
	Anti-MBP	AMAb91063	Monoclonal	IHC, WB, ICC-IF	IgG1	97% - 97%
	Anti-MBP	AMAb91064	Monoclonal	IHC, WB	IgG1	97% - 97%
Serotonin neurons	Anti-TPH2	AMAb91108	Monoclonal	IHC	IgG1	100% - 100%

* Products with enhanced validation for indicated application

SIGNALING

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-ATF2	HPA022134	Polyclonal	IHC, WB, ICC-IF	99% - 99%
Anti-ATF3	AMAb90909	Monoclonal	IHC*, ICC-IF	92% - 92%
	HPA001562	Polyclonal	IHC, ICC-IF	92% - 92%
Anti-ATP1B1	HPA012911	Polyclonal	IHC*, WB*	93% - 93%
Anti-ATP1B2	HPA010698	Polyclonal	IHC*	96% - 98%
Anti-CAMK2B	HPA026307	Polyclonal	IHC*, WB	96% - 96%
Anti-CAMK2D	HPA026281	Polyclonal	IHC	100% - 97%
Anti-C-FOS	HPA018531	Polyclonal	IHC, ICC-IF	94% - 94%
Anti-CHAT	AMAb91130	Monoclonal	IHC*, ICC-IF	96% - 96%
	HPA048547	Polyclonal	IHC	96% - 96%
Anti-CHRM1	HPA014101	Polyclonal	IHC*	98% - 97%
Anti-CLIC4	HPA008019	Polyclonal	IHC*, WB*,	98% - 97%
Anti-CREB1	HPA019150	Polyclonal	IHC, WB, ICC-IF	100% - 100%
Anti-DDC	AMAb91089	Monoclonal	IHC*,WB	90% - 88%
	HPA017742	Polyclonal	IHC*,WB,ICC-IF	90% - 88%
Anti-SLC1A1	HPA020086	Polyclonal	IHC, WB	77% - 79%
Anti-SLC1A2	HPA009172	Polyclonal	IHC*	87% - 89%
Anti-GABRA3	HPA000839	Polyclonal	IHC,WB	91% - 93%
Anti-GABRB1	HPA051297	Polyclonal	IHC	97% - 100%
	HPA035622	Polyclonal	IHC	96% - 94%
Anti-GAD1	AMAb91076	Monoclonal	IHC,WB	94% - 94%
	HPA058412	Polyclonal	IHC*,WB	94% - 94%
Anti-GAD2	AMAb91048	Monoclonal	IHC*,WB	84% - 88%
	HPA044637	Polyclonal	IHC	84% - 88%
Anti-SLC6A1	HPA013341	Polyclonal	IHC, WB	98% - 98%
Anti-SLC6A11	HPA037981	Polyclonal	IHC, WB	85% - 87%
Anti-GLUR2 (AMPA2)	HPA008441	Polyclonal	IHC*	100% - 100%
Anti-HTR2A	HPA014011	Polyclonal	IHC*	95% - 97%
Anti-KCC4	HPA041652	Polyclonal	IHC,WB	84% - 82%
Anti-KCNJ5 (KIR3.4)	HPA017353	Polyclonal	IHC*,WB*	89% - 89%
Anti-KIF11	HPA010568	Polyclonal	IHC*,WB	88% - 83%
Anti-KIF17	HPA032085	Polyclonal	IHC*,ICC-IF	85% - 82%
Anti-KIF18A	HPA039312	Polyclonal	IHC,WB,ICC-IF	80% - 82%
Anti-KIF1C	HPA024602	Polyclonal	IHC,WB	81% - 83%
Anti-KIF21B	HPA027249	Polyclonal	IHC	91% - 93%
Anti-KIF26B	HPA028562	Polyclonal	IHC,ICC-IF	88% - 80%
Anti-KIF4A (KIF4A & B)	HPA034745	Polyclonal	IHC,WB,ICC-IF	64% - 63%
Anti-KIF5A	HPA004469	Polyclonal	IHC,WB	91% - 88%
Anti-KIF5C	HPA035210	Polyclonal	IHC*,WB	100% - 100%
Anti-KIF7	HPA043145	Polyclonal	IHC	69% - 69%
Anti-KIFAP3	HPA023742	Polyclonal	IHC	100% - 100%
Anti-MAPK1 (ERK)	HPA030069	Polyclonal	IHC,WB	100% - 100%
Anti-MAPK3 (ERK1)	HPA005700	Polyclonal	IHC,WB	98% - 98%
Anti-MGLUR1	HPA015701	Polyclonal	IHC	80% - 80%
Anti-MGLUR8	HPA051481	Polyclonal	IHC	95% - 90%
Anti-NCS1	HPA019713	Polyclonal	IHC*,WB*,ICC-IF	100% - 100%
Anti-PRKCA	HPA006563	Polyclonal	IHC,WB*,ICC-IF	99% - 99%
Anti-PRKCH	HPA053709	Polyclonal	IHC,ICC-IF	97% - 64%
Anti-PNMT	HPA051005	Polyclonal	IHC*	89% - 92%
Anti-PRKACB (PKACB)	HPA029754	Polyclonal	IHC	73% - 76%
Anti-PRKCZ	HPA021851	Polyclonal	IHC*,WB, ICC-IF	94% - 94%
Anti-RAB3A	HPA003160	Polyclonal	IHC	99% - 99%
Anti-RAP1GAP	HPA001922	Polyclonal	IHC	92% - 91%
Anti-RAP1GAP2	HPA022896	Polyclonal	IHC,WB,ICC-IF	94% - 95%

Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity to mouse - rat
Anti-SLC17A7 (VGLUT1)	AMAb91041	Monoclonal	IHC*,WB	94% - 94%
	HPA063679	Polyclonal	IHC*	94% - 94%
Anti-SLC22A2	AMAb90792	Monoclonal	IHC*	84% - 77%
	HPA008567	Polyclonal	IHC*	84% - 77%
Anti-SLC32A1 (VGAT)	HPA058859	Polyclonal	IHC*	95% - 93%
Anti-SLC6A2 (NET)	AMAb91116	Monoclonal	IHC	n.d.
Anti-SLC6A3 (DAT)	AMAb91125	Monoclonal	IHC	85% - 85%
Anti-SNAP25	HPA001830	Polyclonal	IHC*,WB*	100% - 100%
Anti-SNAP29	HPA031823	Polyclonal	IHC	89% - 92%
Anti-SST (SOM)	HPA019472	Polyclonal	IHC*,WB	98% - 98%
Anti-STXBP1	HPA008209	Polyclonal	IHC*,WB,ICC-IF	100% - 100%
Anti-STXBP6	HPA003552	Polyclonal	IHC,WB*	99% - 99%
Anti-SYNGR1	HPA029673	Polyclonal	IHC, ICC-IF	90% - 88%
Anti-SYNPR	HPA061671	Polyclonal	IHC*	97% - 97%
Anti-SYP	HPA002858	Polyclonal	IHC*,WB	83% - 83%
Anti-SYT1	HPA008394	Polyclonal	IHC*,WB*	100% - 100%
Anti-SYT12	HPA011006	Polyclonal	IHC	96% - 98%
Anti-SYT13	HPA046224	Polyclonal	IHC	96% - 93%
Anti-SYT16	HPA004199	Polyclonal	IHC,WB*	95% - 95%
Anti-TGFA	HPA042297	Polyclonal	IHC	93% - 93%
Anti-TH	AMAb91112	Monoclonal	IHC	88% - 88%
	HPA061003	Polyclonal	IHC*, WB	88% - 88%
Anti-TPH2 (NTPH)	AMAb91108	Monoclonal	IHC	100% - 100%
Anti-VAMP4	HPA050418	Polyclonal	IHC*,ICC-IF	100% - 100%
Anti-VAMP7	HPA036733	Polyclonal	IHC,ICC-IF	98% - 93%

* Products with enhanced validation for indicated application

SOX FAMILY

SOX Group	Product Name	Product Number	Clonality	Validated Applications	Antigen sequence identity (mouse - rat)	Involved in
SOXB1	Anti-SOX2	AMAb91307	Monoclonal	IHC, WB*, ICC-IF	99% - 99%	Early embryonic development, Neural stem cells
	Anti-SOX2	HPA045725	Polyclonal	WB*, ICC-IF	99% - 99%	
	Anti-SOX3	AMAb91312	Monoclonal	WB	82% - 31%	Early neural development. Male sex development.
	Anti-SOX3	HPA054720	Polyclonal	ICC-IF	93% - 41%	
	Anti-SOX3	HPA075003	Polyclonal	ICC-IF	76% - 36%	
SOXB2	Anti-SOX21	AMAb91309	Monoclonal	IHC, WB	100% - n.d.	Immature neurons. Progression of neuronal differentiation.
	Anti-SOX21	AMAb91311	Monoclonal	IHC, WB	100% - n.d.	
	Anti-SOX21	HPA064084	Polyclonal	ICC-IF	96% - 37%	
SOXC	Anti-SOX4	HPA029901	Polyclonal	IHC, ICC-IF	100% - 39%	Neural lineage progression. Bone development. Tumorigenesis.
	Anti-SOX4	AMAb91378	Monoclonal	IHC, ICC-IF	78% - n.d.	
	Anti-SOX4	AMAb91380	Monoclonal	IHC, ICC-IF	78% - n.d.	
	Anti-SOX11	AMAb90501	Monoclonal	IHC, WB*	82% - 82%	CNS development. Tumorigenesis.
	Anti-SOX11	AMAb90502	Monoclonal	IHC, WB	82% - 82%	
	Anti-SOX11	HPA000536	Polyclonal	IHC, WB	82% - 82%	Mantle cell lymphoma.
	Anti-SOX12	HPA055052	Polyclonal	ICC-IF	96% - 96%	CNS, male and female tissues.
Anti-SOX12	HPA061627	Polyclonal	ICC-IF	91% - 91%		
SOXD	Anti-SOX5	HPA060499	Polyclonal	WB, ICC-IF	91% - 88%	Chondrogenesis. Tumorigenesis.
	Anti-SOX6	HPA001923	Polyclonal	IHC, ICC-IF	96% - 96%	Neural system development. Chondrogenesis. Maintenance of cardiac and skeletal muscle. Tumorigenesis.
	Anti-SOX6	HPA003908	Polyclonal	IHC*, WB*	97% - 95%	
	Anti-SOX6	AMAb91382	Monoclonal	WB	84% - n.d.	
	Anti-SOX6	AMAb91383	Monoclonal	IHC, ICC-IF	84% - n.d.	
	Anti-SOX13	HPA051790	Polyclonal	ICC-IF	87% - 87%	Embryonic development.
	Anti-SOX13	HPA054843	Polyclonal	ICC-IF	93% - 87%	Diabetes.
SOXE	Anti-SOX8	HPA058665	Polyclonal	IHC*, ICC-IF	73% - 70%	CNS, limb and facial development. Male sex determination.
	Anti-SOX9	AMAb90795	Monoclonal	IHC, WB*, ICC-IF	97% - 96%	Neural crest development, gliogenesis. Chondrocyte differentiation. Glioma.
	Anti-SOX9	HPA001758	Polyclonal	IHC*, WB, ICC-IF	97% - 96%	
	Anti-SOX10	AMAb91297	Monoclonal	IHC, ICC-IF	98% - 98%	Neural crest and peripheral nervous system development. Oligodendrocytes.
	Anti-SOX10	HPA068898	Polyclonal	IHC*, ICC-IF	98% - 98%	
SOXF	Anti-SOX7	HPA009065	Polyclonal	IHC, WB	91% - 91%	Hematopoietic/endothelial development. Suppression of tumorigenesis.
	Anti-SOX17	HPA068399	Polyclonal	IHC*	89% - 87%	Gut and heart development. Tumorigenesis.
	Anti-SOX18	HPA073703	Polyclonal	ICC-IF	89% - 89%	Hair, blood vessel, and lymphatic vessel development.
SOXG	Anti-SOX15	HPA067196	Polyclonal	IHC*, ICC-IF	52% - 52%	Muscle differentiation.
	Anti-SOX15	HPA074049	Polyclonal	ICC-IF	71% - 36%	Tumorigenesis.
SOXH	Anti-SOX30	HPA006159	Polyclonal	IHC*, WB*	68% - 70%	Differentiation of developing male germ cells.

* Products with enhanced validation for indicated application

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Triple A Polyclonals™ are rabbit polyclonal primary antibodies developed within the Human Protein Atlas project. IHC characterization data from 44 normal and 20 cancer tissues is available on the Human Protein Atlas portal.

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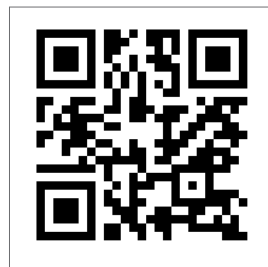
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