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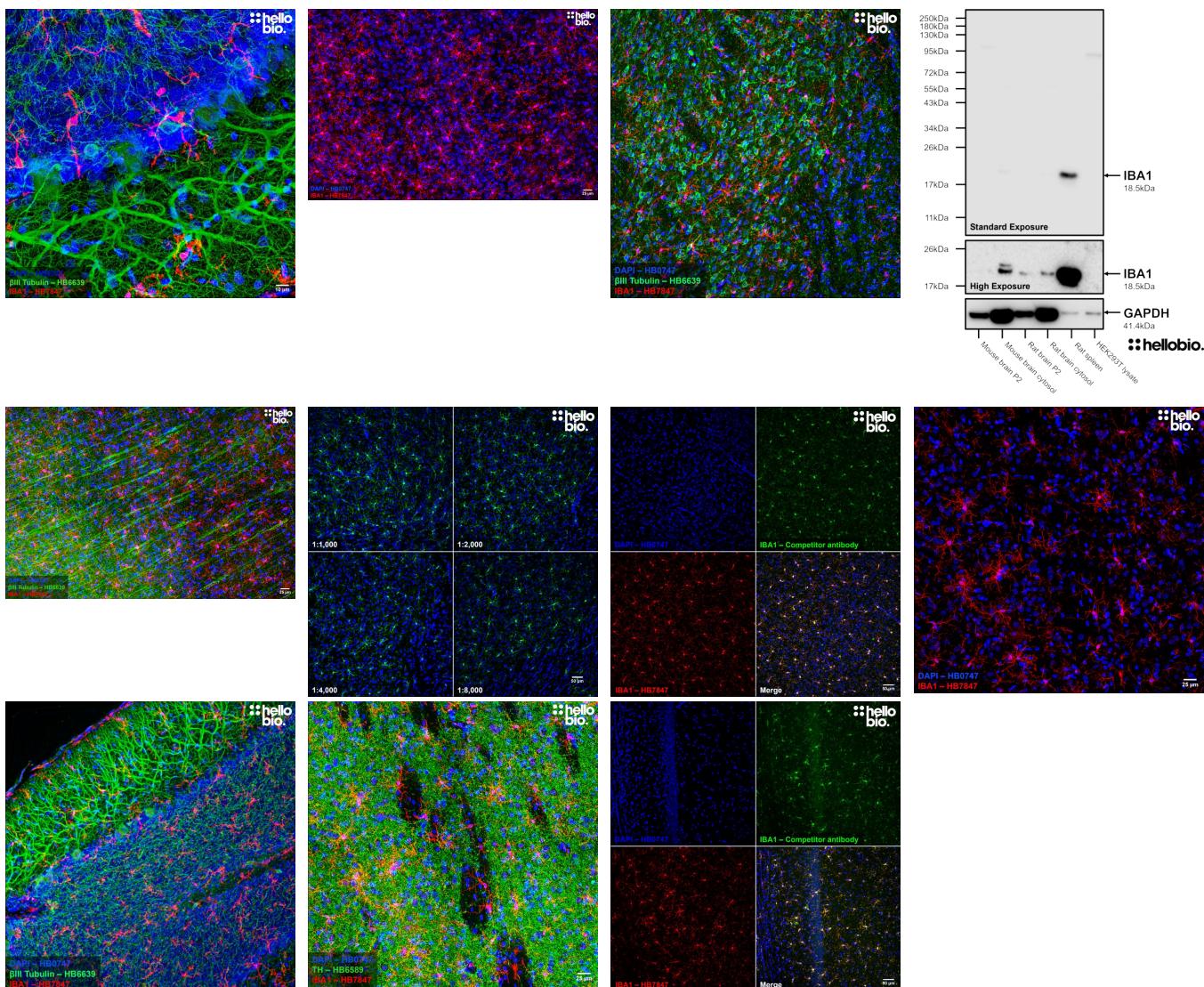
DATASHEET

Anti-IBA1 antibody ValidAbTM

Product overview

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|-------------|---|
| Name | Anti-IBA1 antibody ValidAb TM |
| Cat No | HB7847 |
| Host | Rabbit |
| Clonality | Polyclonal |
| Target | IBA1 |
| Description | Antibody to IBA1 - calcium binding protein widely used as a marker for microglial cells. Part of the ValidAb TM range of highly validated, data-rich antibodies. |

Validation data



Product information

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| Immunogen | C-terminal peptide of human IBA1 coupled to keyhole limpet haemocyanin (KLH) |
| Purification | Unpurified |
| Formulation | Serum + 0.03% sodium azide |
| Predicted species reactivity | Mouse, Rat, Human |
| Tested species reactivity | Mouse, Rat |

Tested applications

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| Applications | IHC(IF) |
| IHC(IF) optimal concentration | 1:2,000 dilution as tested in free-floating paraformaldehyde fixed rat brain sections |
| Positive control | IBA1 is widely expressed in microglia across the CNS making brain tissue an excellent positive control. Additionally there is high IBA1 expression in the spleen which is another popular positive control. |
| Negative control | IBA1 expression is absent in many popular cell lines such as HEK293T and HeLa making them a good negative control. |
| Open data link | Please follow this link to the OSF . |

Target information

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| Other names | AIF1, Allograft inflammatory factor 1, ionized calcium-binding adapter molecule 1 |
| UniProt ID | P55008 |
| Gene name | AIF1 |
| NCBI full gene name | Allograft inflammatory factor 1 |
| Entrez gene ID | 199 |
| Amino acids | 147 (16.7kDa) |
| Isoforms | IBA1 has three known isoforms: <ul style="list-style-type: none">• Isoform 1 (canonical) - 147aa, 16.7kDa• Isoform 2 (G1) - 93aa, 10.5kDa, missing residues 1-54• Isoform 3 - 132aa, 14.6kDa, missing residues 121-147 and difference in sequence between residue 1 and 65. |
| Expression | Expressed in myeloid lineage cells including microglia within the CNS and circulating macrophages. IBA1 is also expressed in dendritic cells and osteoclasts. |
| Subcellular expression | Cytosolic |
| Target function | IBA1 is involved in the activation of macrophages and as part of this has been associated with multiple processes. IBA1 has been found to be involved in the formation of membrane ruffles, F-actin remodelling, regulation of cell cycle progression, and phagocytosis. |
| Processing | IBA1 has the initiator methionine removed to form an active conformation |
| Post translational modifications | IBA1 is subject to phosphorylation on residues S2, S38 and S39 in addition to acetylation on K11. |

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| Other names | AIF1, Allograft inflammatory factor 1, ionized calcium-binding adapter molecule 1 |
| Homology (compared to human) | A BLAST search revealed the following homologies: <ul style="list-style-type: none">• Mouse - 89.1% homology• Rat - 89.8% homology |
| Similar proteins | A BLAST search identified the following similar proteins to IBA1: <ul style="list-style-type: none">• AIF2, 66.2% homology• Swiprosin-1, 44.4% homology• Swiprosin-2, 47.1% homology |

Storage & Handling

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| Storage instructions | -20°C then use reconstitution advice |
| Reconstitution advice | Upon receipt store at either -20°C or -80°C. |
| <p>For 100µg packs either:</p> <ul style="list-style-type: none">• Reconstitute with 100µl dH₂O and store at 4°C• Reconstitute with 50µl dH₂O and 50µl glycerol then store at -20°C• Reconstitute with 100µl dH₂O, aliquot then snap freeze and store at -80°C | |
| <p>For 25µg packs either:</p> <ul style="list-style-type: none">• Reconstitute with 25µl dH₂O and store at 4°C• Reconstitute with 12.5µl dH₂O and 12.5µl glycerol then store at -20°C• Reconstitute with 25µl dH₂O, aliquot then snap freeze and store at -80°C | |
| <p>For more information read our guide on the best care for your product. Take care when opening as the precipitate is extremely light and can easily be lost if disturbed. When reconstituting make sure that the antibody is thoroughly dissolved by pipetting up and down before giving the antibody a brief spin at 10,000g to make sure that all material is recovered and at the bottom of the tube.</p> | |
| Important | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use |

References

Microglia-specific localisation of a novel calcium binding protein, Iba1.

Ito D et al (1998) Brain research. Molecular brain research 57

PubMedID [9630473](#)

Iba1 is an actin-cross-linking protein in macrophages/microglia.

Sasaki Y et al (2001) Biochemical and biophysical research communications 286

PubMedID [11500035](#)

Altered synaptic connectivity and brain function in mice lacking microglial adapter protein Iba1.

Lituma PJ et al (2021) Proceedings of the National Academy of Sciences of the United States of America 118

PubMedID [34764226](#)

