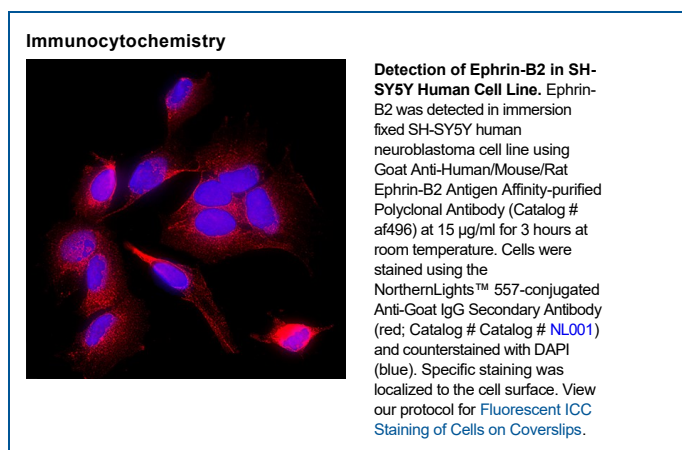
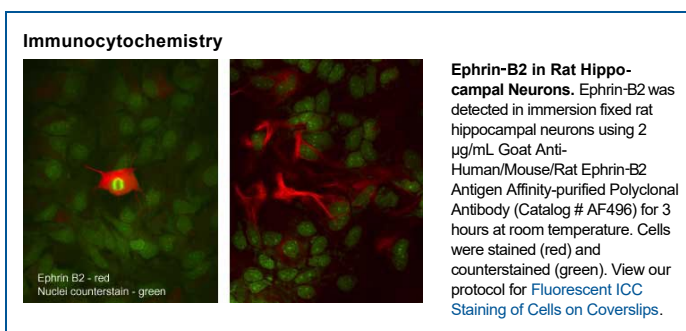
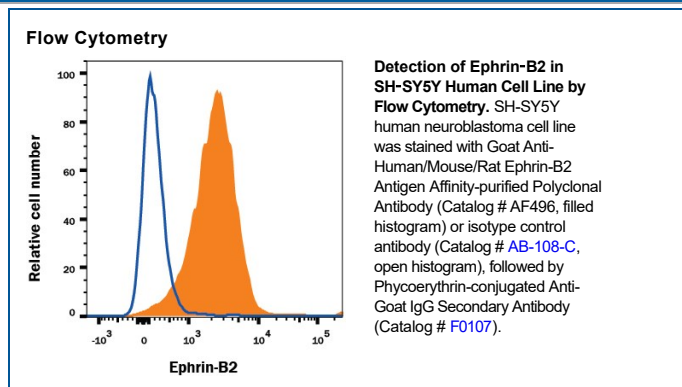
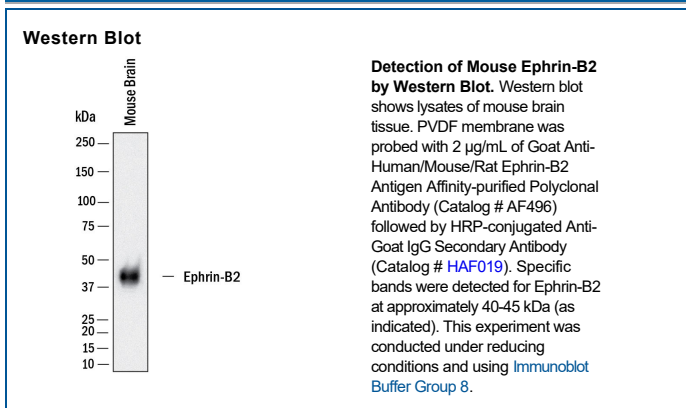


DESCRIPTION	
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects mouse Ephrin-B2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant mouse Ephrin-B1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Ephrin-B2 Arg27-Ala227 Accession # AAA82934
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
<i>Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.</i>		
	Recommended Concentration	Sample
<b>Western Blot</b>	2 µg/mL	See Below
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

## DATA



### Immunohistochemistry

**B**

**Detection of Human Ephrin-B2 by Immunohistochemistry** Gene signatures peculiar to the venular compartment. (A) EFNB2 expression measured by scRNA-seq (left) and immunofluorescence staining (right) denoting its abundance across different BEC subpopulations and its exclusive expression in human dermal BVs (white arrowheads). (B) Representative confocal images of skin sections (upper) and whole-mount skin blocks (lower) stained for ERG (green), EFNB2 (red) and ICAM1 (white). The unique composition of EFNB2 and ICAM1 expression enables the discrimination of arterioles (empty arrowheads), post-capillary venules (\*) and venules (white arrowheads). (C) EGR2 expression is most enriched in the post-capillary venule cluster and is restricted to BVs (white arrowheads). (D) Representative section (upper) and whole-mount staining (lower) of ERG (green), EGR2 (red) and ICAM1 (white), highlighting EGR2+ICAM1+ BVs. Scale bars: 100 µm. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35406678>), licensed under a CC-BY license. Not internally tested by R&D Systems.

### Immunohistochemistry

**A**

**Detection of Human Ephrin-B2 by Immunohistochemistry** Gene signatures peculiar to the venular compartment. (A) EFNB2 expression measured by scRNA-seq (left) and immunofluorescence staining (right) denoting its abundance across different BEC subpopulations and its exclusive expression in human dermal BVs (white arrowheads). (B) Representative confocal images of skin sections (upper) and whole-mount skin blocks (lower) stained for ERG (green), EFNB2 (red) and ICAM1 (white). The unique composition of EFNB2 and ICAM1 expression enables the discrimination of arterioles (empty arrowheads), post-capillary venules (\*) and venules (white arrowheads). (C) EGR2 expression is most enriched in the post-capillary venule cluster and is restricted to BVs (white arrowheads). (D) Representative section (upper) and whole-mount staining (lower) of ERG (green), EGR2 (red) and ICAM1 (white), highlighting EGR2+ICAM1+ BVs. Scale bars: 100 µm. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35406678>), licensed under a CC-BY license. Not internally tested by R&D Systems.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
<b>Shipping</b>	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Ephrin-B2, also known as Htk-L, ELF-2, LERK-5, and NLERK-1 (1), is a member of the ephrin ligand family which binds members of the Eph receptor family. All ligands share a conserved extracellular sequence, which most likely corresponds to the receptor binding domain. This conserved sequence consists of approximately 125 amino acids and includes four invariant cysteines. The B-class ligands are transmembrane proteins which can become tyrosine phosphorylated upon receptor ligation. The cytoplasmic domains are approximately 80 amino acids long and are highly conserved, especially the last 33 amino acids. Several signaling molecules have been shown to interact with the cytoplasmic region, although specific signaling roles have yet to be elucidated. Ephrin-B2 has been shown to bind EphA4, EphB1, EphB2, EphB3, and EphB4 (2, 3). The extracellular domains of murine and human Ephrin-B2 share 98% amino acid identity. Only membrane-bound or Fc-clustered ligands are capable of activating the receptor *in vitro*. While soluble monomeric ligands bind the receptor, they do not induce receptor autophosphorylation and activation (2). *In vivo*, the ligands and receptors display reciprocal expression (3). It has been found that nearly all the receptors and ligands are expressed in developing and adult neural tissue (3). The Ephrin/Eph families also appear to play a role in angiogenesis (3).

**References:**

1. Eph Nomenclature Committee [letter]. (1997) Cell **90**:403.
2. Flanagan, J.G. and P. Vanderhaeghen (1998) Annu. Rev. Neurosci. **21**:309.
3. Pasquale, E.B. (1997) Curr. Opin. Cell Biol. **9**:608.