

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ECE-2 in direct ELISAs and Western blots. In Western blots, 30% cross-reactivity with recombinant human (rh) ECE-1 and no cross-reactivity with rhKELL is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 233914
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ECE-2 Val104-Leu787 Accession # O60344
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

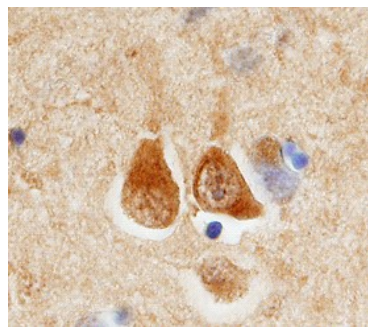
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human ECE-2 (Catalog # 1645-ZN)
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



ECE-2 in Human Brain.
ECE-2 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using 3 µg/mL Rat Anti-Human ECE-2 Monoclonal Antibody (Catalog # MAB16451) overnight at 4 °C. Tissue was stained with the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ECE-2 is a zinc protease of the neprilysin (NEP) family, which also includes ECE-1, PEX, XCE, DINE, Kell and several NEP-like proteins (1). ECE-2 is a type II transmembrane protein with a short cytoplasmic tail and a large ectodomain. Three alternatively spliced forms differ in their cytoplasmic tail (2). In addition to big endothelin-1, ECE-2 cleaves a variety of bioactive peptides such as bradykinin, neurotensin, angiotensin I, substance P, dynorphin B, proenkephalin-derived peptides such as peptide E, BAM 22 and BAM18, and PEN-LEN, an endogenous inhibitor of prohormone convertase 1 (3). Together with ECE-1, it is also involved in degradation of β-amyloid peptide (4). The ectodomain of human ECE-2 was expressed with an N-terminal His tag and purified.

References:

1. Turner, A.J. *et al.* (2001) *BioEssays* **23**:261.
2. Lorenzo, M.N. *et al.* (2001) *Biochim. Biophys. Acta* **1522**:46.
3. Mzhavia, N. *et al.* (2003) *J. Biol. Chem.* **278**:14704.
4. Eckman, E.A. *et al.* (2003) *J. Biol. Chem.* **278**:2081.