Human ICAM-5 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1950

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ICAM-5 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant mouse ICAM-5 is observed and less than 2% cross-reactivity with recombinant human (rh) ICAM-1, rhICAM-2 and rhICAM-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ICAM-5 Ala28-Glu570 Accession # Q9UMF0
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.

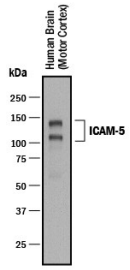
APPLICATIONS

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	0.1 µg/mL	See Below
Simple Western	1 µg/mL	See Below

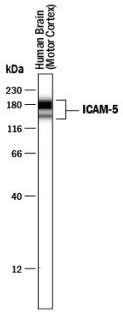
DATA

Western Blot



Detection of Human ICAM-5 by Western Blot. Western blot shows lysates of human brain (motor cortex) tissue. PVDF membrane was probed with 0.1 µg/mL of Goat Anti-Human ICAM-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1950) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for ICAM-5 at approximately 115 and 140 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human ICAM-5 by Simple Western™. Simple Western lane view shows lysates of human brain (motor cortex) tissue, loaded at 0.2 mg/mL. Specific bands were detected for ICAM-5 at approximately 146 and 180 kDa (as indicated) using 1 µg/mL of Goat Anti-Human ICAM-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1950) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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

Intercellular adhesion molecule-5 (ICAM-5), also known as telencephalin, is a cell surface glycoprotein belonging to the immunoglobulin superfamily. Human ICAM-5 consists of an 832 amino acid (aa) extracellular domain containing 9 immunoglobulin (Ig) domains and 15 N-glycosylation sites, a 28 aa transmembrane domain, and a 64 aa cytoplasmic domain. ICAM-5 shares 38-55% aa identity with other ICAMs, being most closely related to ICAM-1 (50% identity) and ICAM-3 (55% identity) (1). Human and mouse ICAM-5 share 85% aa identity. The tissue distribution of ICAM-5 is unique among ICAMs, being expressed only in telencephalic regions of the central nervous system (2). Like other ICAMs, ICAM-5 binds to the leukocyte integrin LFA-1 (CD11a/CD18) (3). Binding of ICAM-5 to LFA-1 is dependent on the first amino terminal Ig domain of ICAM-5 (4). ICAM-5 also displays homophilic binding, with the amino terminal Ig domain binding to Ig domains 4-5. Homophilic binding of ICAM-5 is dependent of ICAM-5 being in a monomeric form. The monomeric form of ICAM-5 is found during dendritogenesis in developing brain, whereas a high molecular weight complex is found in mature neurons (5).

References:

1. Mizuno, T. *et al.* (1997) J. Biol. Chem. **272**:1156.
2. Yoshihara, Y. *et al.* (1994) Neuron **12**:541.
3. Tain, L. *et al.* (1997) J. Immunol. **158**:928.
4. Tain, L. *et al.* (2000) Eur. J. Immunol. **30**:810.
5. Tain, L. *et al.* (2000) J. Immunol. **150**:243.

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