Human CXADR Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF3336

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXADR in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant mouse CXADR is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CXADR Leu20-Gly237 Accession # P78310
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	Recombinant Human CXADR Fc Chimera (Catalog # 3336-CX)

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.
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

CXADR (coxsackie and adenovirus receptor), also known as CAR, is a 46 kDa type I transmembrane glycoprotein that belongs to the CTX family of the Ig superfamily (1-3). CXADR has received attention as a receptor that facilitates gene transfer mediated by most adenoviruses (1, 2). It is also an adhesion molecule within junctional complexes, notably between epithelial cells lining body cavities and within myocardial intercalated discs (1, 2, 4). CXADR is essential for normal cardiac development in the mouse (7). It is expressed throughout brain neuroepithelium during development, but mainly in ependymal cells in the adult (4-6). The 365 amino acid (aa) human CXADR contains a 19 aa signal sequence, a 218 aa extracellular domain (ECD) with a V-type (D1) and a C2-type (D2) Ig-like domain, a 21 aa transmembrane segment and a 107 aa intracellular domain. D1 is thought to be responsible for homodimer formation in trans within tight junctions (2). The fiber knob of adenoviruses attaches at a similar site, and evidence suggests that disruption of tight junctions facilitates virus binding (1, 2). The C-terminus interacts with several cytoplasmic junctional proteins, microtubules and the actin cytoskeleton (1, 8, 9). The ECD of human CXADR shares 90% aa sequence identity with mouse, rat, and porcine CXADR, and 92% and 89% aa identity with bovine and canine CXADR, respectively. An alternately spliced isoform (CXADR2) that diverges in the C-terminal 15 aa shows a similar expression pattern (4, 10). Transcription of splice variants that produce soluble forms of CXADR has been detected, and secreted forms in serum and pleural fluid potentially block viral infection (11).

References:

1. Coyne, C.B. and J.M. Bergelson (2005) Adv. Drug Deliv. Rev. **57**:869.
2. Philipson, L. and R.F. Pettersson (2004) Curr. Top. Microbiol. Immunol. **273**:87.
3. Tomko, R.P. *et al.* (1997) Proc. Natl. Acad. Sci. USA **94**:3352.
4. Raschperger, E. *et al.* (2006) Exp. Cell Res. **312**:1566.
5. Hotta, Y. *et al.* Dev. Brain Res. **143**:1.
6. Hauwel, M. *et al.* (2005) Brain Res. Rev. **48**:265.
7. Chen, J. *et al.* (2006) Circ. Res. **98**:923.
8. Fok, P.T. *et al.* (2007) J. Biol. Chem. **282**:7512.
9. Huang, K-C. *et al.* (2007) FEBS Lett. **581**:2702.
10. Mirza, M. *et al.* (2006) Exp. Cell Res. **312**:817.
11. Bernal, R.M. *et al.* (2002) Clin. Cancer Res. **8**:1915.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449