

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ADAM10 in direct ELISAs and Western blots. In Western blots, shows less than 5% cross-reactivity with recombinant human (rh) ADAM8, 9, 15, 17/TACE, and recombinant mouse ADAM10.
Source	Monoclonal Mouse IgG _{2B} Clone # 163003
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ADAM10 Thr214-Glu672 Accession # O14672
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	MCF-7 human breast cancer cell line fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

ADAM10 (also known as Kuzbanian, mammalian disintegrin metalloprotease, myelin-associated metalloproteinase) is a member of the ADAM family that contains a disintegrin and metalloprotease-like domain (1, 2). Like other membrane-anchored ADAMs, ADAM10 consists of the following domains, pro with a cysteine switch and furin cleavage sequence, catalytic with the zinc-binding site and Met-turn expected for reprolysins, disintegrin-like, cysteine-rich, EGF-like, transmembrane, and cytoplasmic. ADAM10 is highly conserved, with 97% amino acid identity between mouse, rat, bovine and human and 45% identity between mouse and *Drosophila*. The active enzyme processes notch, notch ligand delta, and amyloid protein precursor at the alpha site, playing an important role in neurogenesis (3, 4). It also processes the 26 kDa membrane-anchored pro-tumor necrosis factor-α (TNF-α) to the 17 kDa mature TNF-α (5). It cleaves myelin basic protein and type IV collagen (6, 7). ADAM10 is widely expressed in tissues and resides both on the cell surface and in the cell (8, 9).

References:

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4. Lammich, *et al.* (1999) *Proc. Natl. Acad. Sci. USA* **96**:3922.
5. Rosendahl, *et al.* (1997) *J. Biol. Chem.* **272**:24588.
6. Chantry, *et al.* (1989) *J. Biol. Chem.* **264**:21603.
7. Millichip, *et al.* (1998) *Biochem. Biophys. Res. Comm.* **245**:594.
8. Chantry and Glynn (1990) *Biochem. J.* **268**:245.
9. Fahrenholz, *et al.* (2000) *Ann. N.Y. Acad. Sci.* **920**:215.

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