

DESCRIPTION

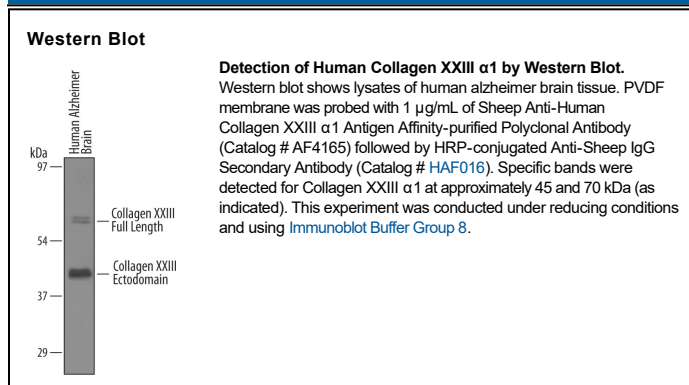
Species Reactivity	Human
Specificity	Detects human Collagen XXIII α 1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human COL25A1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Collagen XXIII α 1 Glu111-Lys540 Accession # Q86Y22
Formulation	Lyophilized from a 0.2 μ m 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 μ m 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 μ g/mL	See Below

DATA



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 $^{\circ}$ 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 $^{\circ}$C as supplied. ● 1 month, 2 to 8 $^{\circ}$C under sterile conditions after reconstitution. ● 6 months, -20 to -70 $^{\circ}$C under sterile conditions after reconstitution.

BACKGROUND

Collagen XXIII alpha 1 (sometimes abbreviated COL23A1) is a ~75 kDa type II transmembrane nonfibrillar collagen that is a member of the collagenous transmembrane protein superfamily (1, 2). This family also includes collagens XIII, XVII, XXV and non-collagens with triple-helical regions such as ectodysplasin A, class A macrophage scavenger receptors, and MARCO (2). The human Collagen XXIII mRNA encodes a 540 amino acid (aa) protein containing a 34 aa N-terminal cytoplasmic domain, a 21 aa transmembrane (TM) domain and a 485 aa extracellular domain (ECD). The ECD contains a coiled-coil consensus sequence to aid homotrimerization (aa 64-69), a furin cleavage site (aa 105-110), a pair of cysteines thought to form intermolecular disulfides (aa 106 and 108), and three collagen domains (1, 3-5). The C-terminal 20 aa, including cysteines at aa 525 and 537 of Collagen XXIII, is conserved among TM collagen proteins. Proteolytic cleavage, occurring mainly in the golgi, allows the Collagen XXIII ectodomain to be secreted as a soluble trimer of ~60 kDa subunits (1, 5). Cell surface cleavage can also occur but is slow, presumably due to presence of Collagen XXIII in lipid raft membrane domains (5). The protein database includes three variants of 537, 316 and 309 aa with various portions missing or substituted; all appear to lack TM segments (6). The human Collagen XXIII ECD shares 92%, 93%, 85%, 85% and 84% aa identity with mouse, rat, canine, equine and bovine Collagen XXIII, respectively. Collagen XXIII is concentrated at sites of cell contact in epithelia, and is thought to be an adhesion molecule (2, 4). Its up-regulation has been correlated with aggressiveness in transformed cells, particularly in prostate cancer (1, 7).

References:

1. Banyard, J. *et al.* (2003) *J. Biol. Chem.* **278**:20989.
2. Franzke, C-W. *et al.* (2005) *J. Biol. Chem.* **280**:4005.
3. Snellman, A. *et al.* (2007) *J. Biol. Chem.* **282**:14898.
4. Koch, M. *et al.* (2006) *J. Biol. Chem.* **281**:21546.
5. Veit, G. *et al.* (2007) *J. Biol. Chem.* **282**:27424.
6. Entrez Accession # EAW53833, EAW53834, and AAH42428.
7. Banyard, J. *et al.* (2007) *Clin. Cancer Res.* **13**:2634.