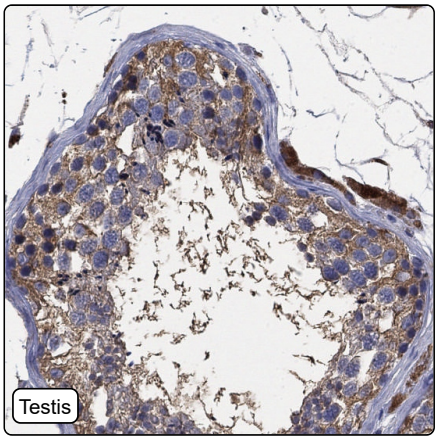
CPTC-CX3CL1-2 (CAB080310)

Uniprot ID: P78423
Protein name: X3CL1_HUMAN
Full name: Fractalkine
Tissue specificity: Expressed in the seminal plasma, endometrial fluid and follicular fluid (at protein level). Small intestine, colon, testis, prostate, heart, brain, lung, skeletal muscle, kidney and pancreas. Most abundant in the brain and heart.
Function: Chemokine that acts as a ligand for both CX3CR1 and integrins ITGAV:ITGB3 and ITGA4:ITGB1 (PubMed:9782118, PubMed:12055230, PubMed:23125415, PubMed:9931005, PubMed:21829356). The CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis (PubMed:9024663, PubMed:9177350, PubMed:9782118, PubMed:12055230). Regulates leukocyte adhesion and migration processes at the endothelium (PubMed:9024663, PubMed:9177350). Can activate integrins in both a CX3CR1-dependent and CX3CR1-independent manner (PubMed:23125415, PubMed:24789099). In the presence of CX3CR1, activates integrins by binding to the classical ligand-binding site (site 1) in integrins (PubMed:23125415, PubMed:24789099). In the absence of CX3CR1, binds to a second site (site 2) in integrins which is distinct from site 1 and enhances the binding of other integrin ligands to site 1 (PubMed:23125415, PubMed:24789099). [Processed fractalkine]: The soluble form is chemotactic for T-cells and monocytes, but not for neutrophils. [Fractalkine]: The membrane-bound form promotes adhesion of those leukocytes to endothelial cells.
Subcellular location:
Unnamed:
Cell membrane (*experimental evidence*) (Topo: Single-pass type I membrane protein (*match to sequence model*))
Processed fractalkine:
Secreted (*experimental evidence*)
Protein existence: Experimental evidence at protein level

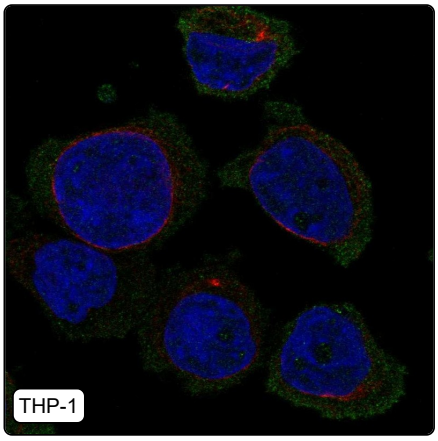
Comment:

Immunohistochemistry



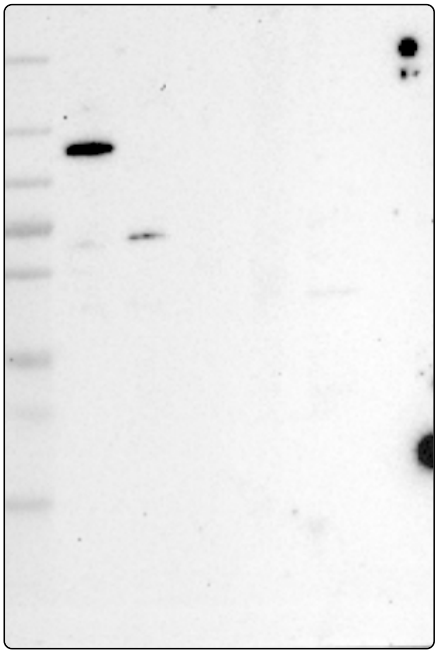
IHC protocol:	HIER pH6, Dilution 1:1850
IHC test staining:	Cytoplasmic positivity in intestines, testis and kidney.
Literature conformance:	Not consistent with gene/protein characterization data
Literature significance:	
RNA similarity:	Very low consistency between antibody staining and RNA expression data
RNA tissue specificity:	Tissue enhanced (breast)
RNA tissue distribution:	Detected in many
IHC Sibling similarity:	Other antibody shows dissimilar IHC staining pattern

Immunofluorescence



IF Overlay:	antibody (green), anti-tubulin (red) and DAPI (blue)
IF main location:	Plasma membrane - 3: **Supportive** (auto)
IF additional location:	
IF approved for publication on HPA:	No
IF in THP-1:	Plasma membrane
IF in U2OS:	Negative

Western blot



WB Size markers (kDa):	250, 130, 100, 70, 55, 35, 25, 15, 10
WB Lanes:	Marker (1), RT-4 (2), U-251MG (3), Plasma (4), Liver (5), Tonsil (6)
WB Target weight (kDa):	6, 38, 42, 43
WB Validation:	Uncertain (Weak band of predicted size but with additional bands of higher intensity also present.)