

# PILR- $\alpha$ (47-12): sc-100286

## BACKGROUND

PILR- $\alpha$  (paired immunoglobulin (Ig)-like type 2 receptor  $\alpha$ ), also known as FDF03, is a member of the paired Ig-like type 2 receptor family and is predominantly expressed in hemopoietic tissues but is also found in macrophages, monocytes, granulocytes and dendritic cells. Typically consisting of two highly related but functionally opposite (inhibiting and activating) receptors, paired receptors play an important role in the regulation of the immune system and in the recognition of the sialylated O-glycosylated ligand MIC2. PILR- $\alpha$  is the inhibitory component of the paired Ig-like type 2 receptor and PILR- $\beta$  is the activating component. PILR- $\alpha$  contains an immune receptor tyrosine-based inhibitory motif (ITIM) which mediates the recruitment of a phosphatase for the inhibition of immune responses. Due to alternative splicing events, four isoforms exist for PILR- $\alpha$ . Isoforms 1 and 2 are single-pass type I membrane proteins and localize to the cell membrane, while isoforms 3 and 4 are secreted proteins.

## REFERENCES

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4. Velten, F.W., et al. 2004. A gene signature of inhibitory MHC receptors identifies a BDCA3<sup>+</sup> subset of IL-10-induced dendritic cells with reduced allostimulatory capacity *in vitro*. *Eur. J. Immunol.* 34: 2800-2811.
5. Shiratori, I., et al. 2004. Activation of natural killer cells and dendritic cells upon recognition of a novel CD99-like ligand by paired immunoglobulin-like type 2 receptor. *J. Exp. Med.* 199: 525-533.
6. Wilson, M.D., et al. 2006. Comparative analysis of the paired immunoglobulin-like receptor (PILR) locus in six mammalian genomes: duplication, conversion, and the birth of new genes. *Physiol. Genomics* 27: 201-218.
7. Satoh, T., et al. 2008. PILR- $\alpha$  is a herpes simplex virus-1 entry coreceptor that associates with glycoprotein B. *Cell* 132: 935-944.
8. Tabata, S., et al. 2008. Biophysical characterization of O-glycosylated CD99 recognition by paired Ig-like type 2 receptors (PILR). *J. Biol. Chem.* 283: 8893-8901.
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## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: PILRA (human) mapping to 7q22.1.

## SOURCE

PILR- $\alpha$  (47-12) is a mouse monoclonal antibody raised against recombinant PILR- $\alpha$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PILR- $\alpha$  (47-12) is recommended for detection of PILR- $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PILR- $\alpha$  siRNA (h): sc-89726, PILR- $\alpha$  shRNA Plasmid (h): sc-89726-SH and PILR- $\alpha$  shRNA (h) Lentiviral Particles: sc-89726-V.

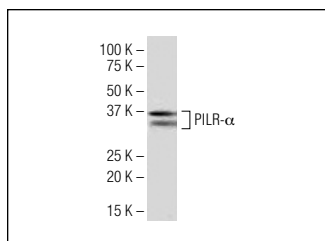
Molecular Weight of PILR- $\alpha$ : 34 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



PILR- $\alpha$  (47-12): sc-100286. Western blot analysis of PILR- $\alpha$  expression in HeLa nuclear extract.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.