

# FLAP (FL-161): sc-28815

## BACKGROUND

Arachidonate 5-lipoxygenase-activating protein (FLAP) is an arachidonic acid binding protein that is critical in the biosynthesis of leukotrienes. FLAP is an integral membrane protein that catalyzes the transformation of arachidonic acid to leukotriene A<sub>4</sub>. Leukotrienes are the biologically active metabolites of arachidonic acid that are involved in host defense pathways and play an important role in inflammatory diseases like asthma, inflammatory bowel disease, psoriasis and arthritis. Inhibitors of FLAP function prevent translocation of 5-lipoxygenase from the cytosol to the membrane and inhibit 5-lipoxygenase activation. The human FLAP gene, which maps to chromosome 13q12.3, encodes a 161 amino acid protein. In alveolar macrophages treated with LPS, FLAP activity is suppressed by the inhibition by nitric oxide synthase, although there is no observable decrease in FLAP expression by this pathway.

## REFERENCES

- Dixon, R.A., et al. 1990. Requirement of a 5-lipoxygenase-activating protein for leukotriene synthesis. *Nature* 343: 282-284.
- Steinhilber, D. 1994. 5-Lipoxygenase: enzyme expression and regulation of activity. *Pharm. Acta Helv.* 69: 3-14.
- Lammers, C.H., et al. 1996. Arachidonate 5-lipoxygenase and its activating protein: prominent hippocampal expression and role in somatostatin signaling. *J. Neurochem.* 66: 147-152.
- Yandava, C.N., et al. 1999. Cytogenetic and radiation hybrid mapping of human arachidonate 5-lipoxygenase-activating protein (ALOX5AP) to chromosome 13q12. *Genomics* 56: 131-133.
- Coffey, M.J., et al. 2000. Prolonged exposure to lipopolysaccharide inhibits macrophage 5-lipoxygenase metabolism via induction of nitric oxide synthesis. *J. Immunol.* 165: 3592-3598.
- LocusLink Report (LocusID: 241) <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: ALOX5AP (human) mapping to 13q12.3; Alox5ap (mouse) mapping to 5 G3.

## SOURCE

FLAP (FL-161) is a rabbit polyclonal antibody raised against amino acids 1-161 representing full length FLAP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

FLAP (FL-161) is recommended for detection of FLAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

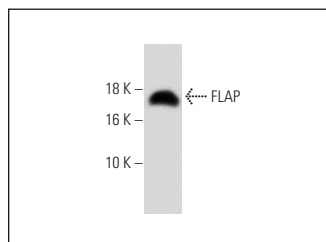
FLAP (FL-161) is also recommended for detection of FLAP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FLAP siRNA (h): sc-41394, FLAP siRNA (m): sc-41395, FLAP shRNA Plasmid (h): sc-41394-SH, FLAP shRNA Plasmid (m): sc-41395-SH, FLAP shRNA (h) Lentiviral Particles: sc-41394-V and FLAP shRNA (m) Lentiviral Particles: sc-41395-V.

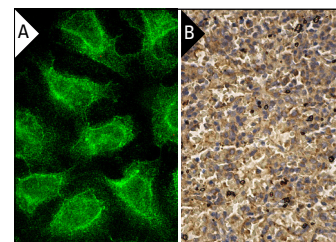
Molecular Weight of FLAP: 18 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189.

## DATA



FLAP (FL-161): sc-28815. Western blot analysis of FLAP expression in LADMAC whole cell lysate.



FLAP (FL-161): sc-28815. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (B).

## SELECT PRODUCT CITATIONS

- Sveinbjörnsson, B., et al. 2008. Expression of enzymes and receptors of the leukotriene pathway in human neuroblastoma promotes tumor survival and provides a target for therapy. *FASEB J.* 22: 3525-3536.
- Sanchez-Galan, E., et al. 2009. Leukotriene B<sub>4</sub> enhances the activity of nuclear factor-κB pathway through BLT1 and BLT2 receptors in atherosclerosis. *Cardiovasc. Res.* 81: 216-225.
- Chakrabarti, S.K., et al. 2011. Evidence for activation of inflammatory lipoxygenase pathways in visceral adipose tissue of obese Zucker rats. *Am. J. Physiol. Endocrinol. Metab.* 300: E175-E187.

## RESEARCH USE

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