

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects recombinant human EN-RAGE in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 161205
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human EN-RAGE Met1-Glu92 Accession # P80511
<b>Conjugate</b>	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	Human whole blood

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 12 months from date of receipt, 2 to 8 °C as supplied.

#### BACKGROUND

EN-RAGE, also known as S100A12 and Calgranulin C, is a 10 kDa member of the S100 (soluble in 100% saturated ammonium sulfate) family of EF-hand calcium-binding proteins. Like other S100 proteins, S100A12 is small and generally acidic (1-3). EN-RAGE forms noncovalent homodimers in the absence of divalent cations (4-6); calcium and zinc promote the formation of higher order assemblies including tetramers and hexamers (4, 7, 8). The ability of S100A12 to chelate zinc enables it to inhibit the zinc-dependent metalloproteases MMP-2, -3, and -9 (8). S100A12 also forms heterodimers with S100A9 and binds to RAGE (Receptor for Advanced Glycation End-products), Annexin V, and several cytosolic enzymes involved in energy metabolism (9, 10). The hexameric form of EN-RAGE in particular binds RAGE with high affinity (7). EN-RAGE induces a variety of inflammatory responses including the *in vivo* recruitment of neutrophils, monocytes, and mast cells and the activation of mast cells and vascular endothelial cells (9, 11-14). EN-RAGE is found at elevated levels under inflammatory conditions such as asthma, gout, rheumatoid arthritis synovial fluid, and atherosclerosis (8, 12, 14). S100A12 also promotes neurite outgrowth in isolated hippocampal neurons (15). An ortholog of S100A12 has not been identified in rodents, but the human protein is functional in mice and rats (11-16).

#### References:

1. Santamaria-Kisiel, L. *et al.* (2006) *Biochem. J.* **396**:201.
2. Leclerc, E. *et al.* (2009) *Biochim. Biophys. Acta* **1793**:993.
3. Wicki, R. *et al.* (1996) *Cell Calcium* **20**:459.
4. Moroz, O.V. *et al.* (2009) *BMC Biochem.* **10**:11.
5. Miranda, L.P. *et al.* (2001) *FEBS Lett.* **488**:85.
6. Vogl, T. *et al.* (1999) *J. Biol. Chem.* **274**:25291.
7. Xie, J. *et al.* (2007) *J. Biol. Chem.* **282**:4218.
8. Goyette, J. *et al.* (2009) *J. Immunol.* **183**:593.
9. Hatakeyama, T. *et al.* (2004) *Eur. J. Biochem.* **271**:3765.
10. Hofmann, M.A. *et al.* (1999) *Cell* **97**:889.
11. Yang, Z. *et al.* (2001) *J. Leukoc. Biol.* **69**:986.
12. Rouleau, P. *et al.* (2003) *Clin. Immunol.* **107**:46.
13. Yan, W.X. *et al.* (2008) *J. Biol. Chem.* **283**:13035.
14. Yang, Z. *et al.* (2007) *J. Allergy Clin. Immunol.* **119**:106.
15. Mikkelsen, S.E. *et al.* (2001) *J. Neurochem.* **79**:767.
16. Fuellen, G. *et al.* (2004) *OMICS* **8**:334.

# Human EN-RAGE/S100A12 Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG<sub>2B</sub> Clone # 161205

Catalog Number: FAB10521V  
100 µg

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