10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# CA1 Antibody (monoclonal) (M05)

Mouse monoclonal antibody raised against a full length recombinant CA1.
Catalog # AT1355a

## Product Information

| | |
|---|---|
| **Application** | WB, IP, E |
| **Primary Accession** | P00915 |
| **Other Accession** | BC027890 |
| **Reactivity** | Human |
| **Host** | mouse |
| **Clonality** | monoclonal |
| **Isotype** | IgG2a Kappa |
| **Clone Names** | M1 |
| **Calculated MW** | 28870 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 759 |
| **Other Names** | Carbonic anhydrase 1, Carbonate dehydratase I, Carbonic anhydrase B, CAB, Carbonic anhydrase I, CA-I, CA1 |
| **Target/Specificity** | CA1 (AAH27890, 1 a.a. ~ 261 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. |
| **Dilution** | WB~~1:500~1000 IP~~N/A E~~N/A |
| **Format** | Clear, colorless solution in phosphate buffered saline, pH 7.2 . |
| **Storage** | Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing. |
| **Precautions** | CA1 Antibody (monoclonal) (M05) is for research use only and not for use in diagnostic or therapeutic procedures. |

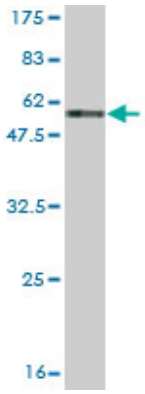
## Background

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA1 is closely linked to CA2 and CA3 genes on chromosome 8, and it encodes a cytosolic protein which is found at the highest level in erythrocytes. Variants of this gene have been described in some populations. Multiple alternatively spliced variants, encoding the same protein, have been identified. Transcript variants of CA1 utilizing alternative polyA_sites have been described in literature.

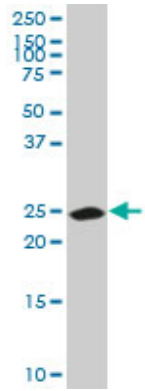
## References

Diabetic retinopathy is not associated with carbonic anhydrase gene polymorphisms. Abhary S, et al. Mol Vis, 2009 Jun 13. PMID 19536309.Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.Decreased total carbonic anhydrase esterase activity and decreased levels of carbonic anhydrase 1 isozyme in erythrocytes of type II diabetic patients. Gambhir KK, et al. Biochem Genet, 2007 Jun. PMID 17464559.Phosph(on)ate as a zinc-binding group in metalloenzyme inhibitors: X-ray crystal structure of the antiviral drug foscarnet complexed to human carbonic anhydrase I. Temperini C, et al. Bioorg Med Chem Lett, 2007 Apr 15. PMID 17314045.Carbonic anhydrase activators: the first X-ray crystallographic study of an adduct of isoform I. Temperini C, et al. Bioorg Med Chem Lett, 2006 Oct 1. PMID 16870440.

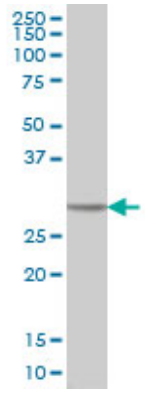
## Images




Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (54.45 KDa) .



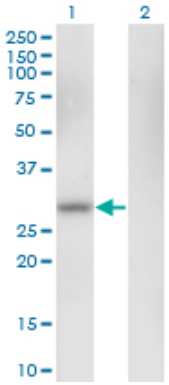

CA1 monoclonal antibody (M05), clone M1. Western Blot analysis of CA1 expression in human spleen.

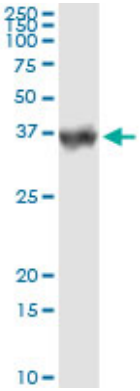



CA1 monoclonal antibody (M05), clone M1 Western Blot analysis of CA1 expression in HeLa ( (Cat # AT1355a )

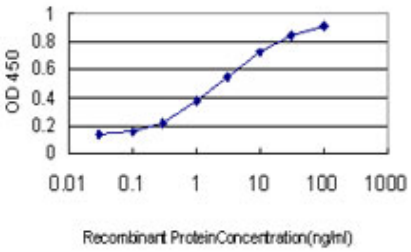
Western Blot analysis of CA1 expression in transfected 293T cell line by CA1 monoclonal antibody (M05), clone M1.

Lane 1: CA1 transfected lysate(28.9 KDa).
Lane 2: Non-transfected lysate.




Immunoprecipitation of CA1 transfected lysate using anti-CA1 monoclonal antibody and Protein A Magnetic Bead (U0007), and immunoblotted with CA1 MaxPab rabbit polyclonal antibody.




Detection limit for recombinant GST tagged CA1 is approximately 0.03ng/ml as a capture antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.