

PRODUCT INFORMATION



ARG2 (human, recombinant)

Item No. 43995

Overview and Properties

Synonyms: Arginase-2, Kidney-type Arginase, Type II Arginase
Source: Active recombinant human N-terminal His-tagged ARG2 expressed in *E. coli*
Amino Acids: 23-354
Uniprot No.: P78540
Molecular Weight: 38.37 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: **batch specific** (≥90% estimated by SDS-PAGE)
Supplied in: 50 mM Tris, pH 8.0, with 150 mM sodium chloride, 0.2 mM manganese chloride, and 5% glycerol

Protein

Concentration: **batch specific** mg/ml

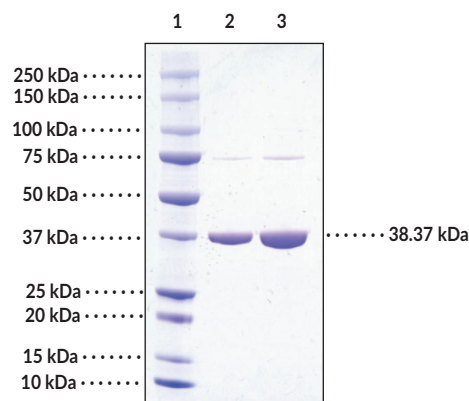
Activity: **batch specific** U/ml

Specific Activity: **batch specific** U/mg

Unit Definition: One unit is defined as the amount of enzyme required to hydrolyze 1 μmol of thioarginine (Item No. 80240) per minute at 25°C in 50 mM Tris, pH 8.0, with 150 mM sodium chloride and 0.2 mM manganese chloride in the presence of 0.5 mM DTNB and 7 mM thioarginine

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



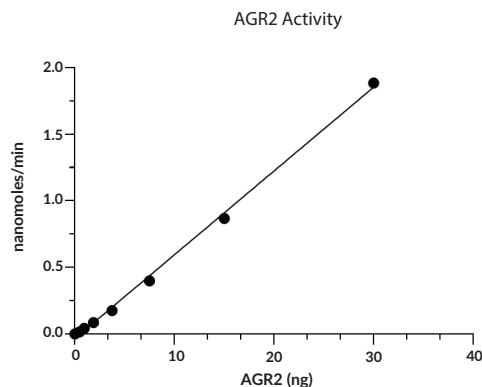
Lane 1: MW Markers

Lane 2: ARG2 (2 μg)

Lane 3: ARG2 (4 μg)

SDS-PAGE Analysis of ARG2.

Representative gel image shown; actual purity may vary between each batch.



ARG2 enzyme activity was determined by measuring absorbance at 412 nm using 7 mM thioarginine (Item No. 80240) as the substrate.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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Description

Arginase-2 (ARG2) is a manganese-metalloenzyme that catalyzes the irreversible hydrolysis of L-arginine (Item No. 23703) into urea and L-ornithine (Item No. 30779).¹ It functions as a homotrimer with each subunit containing a binuclear manganese cluster at its active site.² ARG2 is primarily expressed in kidney, prostate, and brain and localizes to the mitochondria.^{1,3} It is involved in polyamine synthesis, sexual arousal physiology, and innate and adaptive immunity.^{2,4,5} Levels of ARG2 are increased in the plasma of patients with erectile dysfunction, in the airway epithelium of patients with asthma, and in the endothelial cells of patients with pulmonary arterial hypertension.^{6,7} Cayman's ARG2 (human, recombinant) protein can be used for enzyme activity assay and Western blot (WB) applications.

References

1. Moretto, J., Girard, C., and Demougeot, C. The role of arginase in aging: A systematic review. *Exp. Gerontol.* **116**, 54-73 (2019).
2. Christianson, D.W. Arginase: Structure, mechanism, and physiological role in male and female sexual arousal. *Acc. Chem. Res.* **38**(3), 191-201 (2005).
3. Vockley, J.G., Jenkinson, C.P., Shukla, H., *et al.* Cloning and characterization of the human type II arginase gene. *Genomics* **38**(2), 118-123 (1996).
4. Canè, S., Geiger, R., and Bronte, V. The roles of arginases and arginine in immunity. *Nat. Rev. Immunol.* **25**(4), 266-284 (2025).
5. Caldwell, R.W., Rodriguez, P.C., Toque, H.A., *et al.* Arginase: A multifaceted enzyme important in health and disease. *Physiol. Rev.* **98**(2), 641-665 (2018).
6. Heuser, S.K., Li, J., Pudewell, S., *et al.* Biochemistry, pharmacology, and in vivo function of arginases. *Pharmacol. Rev.* **77**(1), 100015 (2025).
7. Xu, W., Kaneko, F.T., Zheng, S., *et al.* Increased arginase II and decreased NO synthesis in endothelial cells of patients with pulmonary arterial hypertension. *FASEB J.* **18**(14), 1746-1748 (2004).

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